U.S. Department of Energy

Information Technology (IT) Reporting Format and Requirements for the BY 2012 Budget Submission

Based on the Final Office of Management and Budget (OMB's) Circular A-11 for the BY 2012 Exhibit 300 and Exhibit 53

September 2010

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1. Purpose

The Office of Management and Budget's (OMB) Circular A-11, sections 53 and 300 (Parts 2 and 7, respectively), mandates reporting requirements for Federal information technology (IT) investments and establishes the processes to be used in completing these requirements. According to section 53, entitled "Information Technology and E-Government", federal agencies are required to submit an annual IT Investment Portfolio report (the Exhibit 53 A report). Section 300, entitled "Planning, Budgeting, Acquisition, and Management of Capital Assets" (Exhibit 300) describes the business case that agencies must complete in order to justify each major IT investment. Because IT activities significantly impact the Department of Energy's (DOE) ability to accomplish its mission and business functions, it is important to identify and coordinate IT activities being planned by all elements of the Department, including Program Offices, Staff Offices, Field Offices, Laboratories, and Contractors. The Exhibit 53 A IT Investment Portfolio report and Exhibit 300 Business Cases as annual reporting requirements are an important part of DOE's process of IT management and oversight. In addition to government-wide requirements documented in the OMB Circular A-11, DOE has established agency-specific requirements, such as a threshold for major investments of $25 million or more over three years (Prior Year, Current Year, Budget Year), as well as additional specific requirements that are documented on the following pages.

The instructions below reflect reporting instructions for preparing BY 2012 portfolios. This document provides specific instructions that DOE organizations will use to meet Exhibit 53 and 300 reporting requirements. Appendix E provides instruction for the inclusion of American Recovery and Reinvestment Act (ARRA) IT-related funding and activities, where applicable, in the Exhibit 53 and 300. Appendix F provides guidance for establishing a DOE Enterprise Architecture Segment mapping based on an investment's primary Federal Enterprise Architecture Business Reference Model mapping.

Please direct any questions you may have related to the agency's IT investment reporting requirements or to this guidance to the DOE CPIC mailbox at DOE.CPICmailbox@hq.doe.gov.

2. Sections of the Exhibit 53 A

The DOE Exhibit 53 A report contains the following six parts:

Part 1. IT Investments by Mission Area Support.

Part 2. IT Investments for Infrastructure, Office Automation, and Telecommunications.

Part 3. IT Investments for Enterprise Architecture and Planning.

Part 4. Investments for Grants Management Systems.

Part 5. National Security Systems IT Investments

Part 6. Grants to State and Local IT Investments.

Note: DOE does not use Parts 5 and 6.

Each investment reported must be classified into one of the six report parts. Definitions of each part are provided below.

Part 1. Mission Area Support:
Consistent with your agency's strategic and annual performance plan, this part reports the amounts for IT investments directly supporting an agency-designated mission area (e.g., human resource management, financial management, command and control). Report each mission area in which IT investments are funded, itemizing the "major" and "non-major" IT investments within each mission area.

Agencies must have a mission area title for "Financial Management", and it must be reported as the first mission area. Some IT investments support financial functions in addition to other functions. If an IT investment supports financial functions, you must include an estimated percentage of the total IT investment obligations associated with the core financial system components. See the financial operations and core financial system definitions provided in this document for reference. While budget formulation and execution systems are part of Financial Management, they are not included in this percent estimation of the core financial system. If the IT investment reported is 100 percent core financial, indicate "100" percent in the column. For mixed systems or investments, indicate the appropriate percentage that is the core financial system.

The complete list of DOE Mission Areas is provided in Appendix B. The only mandatory mission area defined by OMB A-11 is Financial Management.
- **Financial Management Mission Area**: Assign each financial system to the first mission area, Financial Management.
  - Classify the Financial Management investment as major if it obligates more than $500,000 annually on behalf of the Department.

  - Include in each financial management investment short description **a count of the number of federal full time equivalents (FTEs) supporting the system.**

Part 2. IT Investment for Infrastructure, Office Automation and Telecommunications: Report all IT investments supporting common user systems, security, communications, and computing infrastructure. These investments usually involve multiple mission areas and might include general Local Area Network/Wide Area Network (LAN/WAN), desktop, data centers, cross-cutting issues such as shared IT security initiatives, and telecommunications. Report your IT security initiatives and investments not directly tied to a major investment on a separate line identified as "non-major".

OMB has indicated that infrastructure investments should be reported in one of the three reporting categories defined below:

- **End User Systems and Support** – End user hardware (desktop, laptop, and handheld devices), peripherals (local printers, shared printers, and scanners), and software (PC operating systems, office automation suites, messaging and groupware), and hardware and software for help desks.
- **Mainframes and Servers Services and Support** – Mainframes and servers [including web hosting (but not Web content development and management)], hardware and software operations, licenses, maintenance, back-up, continuity of operations, and disaster recovery. Also includes electronic messaging and storage. Includes data center and data center system components including, mainframe mid-tier systems, servers, storage, as well as all the component systems used to house the data center equipment in environmentally correct conditions, including UPS, back-up generators, HVAC systems, and building management systems.
- **Telecommunications Systems and Support** – Telecommunications (including wireless, multimedia, and local and long distance telephone) hardware and software operations, licenses, maintenance, back-up, continuity of operations, and disaster recovery. Also includes network operations command centers, wire closets and cable management.

Section 5.0 provides additional guidance on how to report consolidated infrastructure investments according to the categories defined by OMB.

Part 3. IT Investments for Enterprise Architecture and Planning: Report amounts for IT investments supporting strategic management of IT operations (e.g., business process redesign efforts not part of an individual investment or initiative, enterprise architecture development, capital planning and investment control processes, procurement management, and IT policy development and implementation).

Part 4. IT Investments for Grants Management Systems: Report amounts for IT investments representing planning, developing, enhancing or implementing a grants management system or portion thereof. Include any grants systems initiatives.

Part 5. National Security Systems Investments: Report amounts for IT investments representing planning, development, enhancement or implementations of National Security Systems. Only DoD may use this part.

Part 6. Grants to State and Local IT Investments: Report amounts for grants to State and Local entities that fund the planning, development, enhancement or implementations of State and Local IT systems. Before using Part 6 for anything other than the previously identified, please check with an OMB representative.

DOE Guidance: Part six does not apply to DOE.

No IT investments should be excluded from reporting. The Department does not consider any IT investments it funds at DOE laboratory and contractor facilities to be "incidental to the contract" or otherwise exempted from these reporting requirements.

3. Exhibit 53 A Component Descriptions and Instructions

In order to start the process of Exhibit 53 A reporting, IT investments must be identified. IT investments include any of the following categories:
- Projects that develop new IT systems or capabilities,
- Maintenance and operation of existing IT capabilities or infrastructure,
- Generalized IT management investments such as the development of enterprise architectures.

After identifying the IT investments, the next step is to recognize and understand what reporting information is required. Understanding the Exhibit 53 A report's components and layout is important because it will ensure all required information is gathered for each investment. Below is a summary description of the report fields and instructions for assembling the required information for each field, based on OMB's final Circular A-11 for the BY 2012 Exhibit 300 and Exhibit 53. Remember to provide investment amounts in thousands of dollars for all fiscal years in the electronic Capital Planning and Investment Control System.

Previous Unique Project Identifier (UPI): Means the unique project identifier used to report the investment in any previous exhibit 53 submission to OMB. Indicating the UPI used for a previous submission allows cross-walk and historical analysis crossing fiscal years for tracking purposes. Previous UPI is mandatory, with the exception of new investments. More than one entry is possible to indicate consolidation of previous UPIs (comma separated).

Current UPI Number: Along with the project name, each investment is identified by an OMB identifier number. All investments that have been previously reported to OMB must continue to use the same assigned identifier number from year to year unless the investment has been reclassified in some way (i.e., moved from small to major or reassigned to a new program).

The following section was extracted from OMB's Circular A-11, Section 53 A. It explains how the UPI number is coded for each investment. This guidance should be adhered to when assigning a UPI number to a new investment or changing the UPI for an existing investment. The following sections titled "DOE Guidance" provide specific DOE related guidance with regards to the UPI number for an investment.

Entry	Description
XXX-xx-xx-xx-xx-xxxx-xx	The first three digits are your agency code
	DOE Guidance: The DOE Agency code is **019**.
xxx-**XX**-xx-xx-xx-xxxx-xx	The next two digits are your bureau code
	DOE Guidance: Program Offices' Bureau Codes are listed in Appendix C.
xxx-xx-**XX**-xx-xx-xxxx-xx	These two digits indicate the six parts of the exhibit 53 A:

01 = Part 1. IT Investments by Mission Area Support
02 = Part 2. IT Investments for Infrastructure, Office Automation, and
             Telecommunications
03 = Part 3. IT Investments for Enterprise Architecture and Planning
04 = Part 4. IT Investments for Grants Management Systems
05 = Part 5. Grants to State and Local IT investments
06 = Part 6. National Security Systems investments

> **DOE Guidance:**
> DOE does not report any investments in Parts 5 or 6.

xxx-xx-xx-**XX**-xx-xxxx-xx   These two digits indicate the mission area. Assign a unique code for each mission area reported.

> **DOE Guidance:**
> Program Offices' Mission Areas and corresponding two digit unique codes are listed in Appendix B.
>
> When reporting investments that are being funded by another program office, ensure that the investment is located under the appropriate mission area, i.e., the mission area that funds the investment.

xxx-xx-xx-xx-**XX**-xxxx-xx   These two digits indicate your agency's type of investment. Select one of the following two digit codes according to the type of investment you are reporting:

01 = Major IT investments

> **DOE Guidance:**
> Major Investments**:** Classify investments as **major** if it meets any of the following criteria:
> - An investment with cumulative steady state or mixed life cycle funding of $25 million or more across the Prior Year (PY), the Current Year (CY), and the Budget Year (BY);
> - A financial system that obligates more than $500,000 annually;
> - OMB directed portfolio IT investments;
> - Requires special management attention because of its importance to the mission or function of the agency;
> - Has significant program of policy implication;
> - Has high executive visibility;
> - Has high development, operating, or maintenance costs;
> - Is funded through other than direct appropriations
>
> As discussed previously, every major investment that is identified on the Exhibit 53 A must also have an approved business case justifying why it should receive funding. This justification must be documented in an Exhibit 300 "Capital Asset Plan and Business Case". Section 6.c of these instructions provides further explanation

of the Exhibit 300.

02 = Non-major IT investments

> **DOE Guidance:**
> Non-major investment: Classify your investment as **non-major** if it does not qualify as a major investment according to any of the above criteria.

03 = IT migration investment portion of a larger asset and for which there is an existing business case for the overall asset. Description of the IT investment should indicate the UPI of the major asset investment of the managing partner.

04 = Partner agency funding contribution represents resources provided by partner agency for a joint effort for more than one agency. Use the 04 indicator to identify investments where the business case for the major IT investment is reported in another agency's exhibit 53 A Description of the IT investment should indicate the UPI of the major asset investment of the managing partner.

xxx-xx-xx-xx-xx-**XXXX**-xx

This is a four-digit identification number to identify a specific IT investment. If a new investment is added to the Exhibit 53 A, locate the area of the Exhibit 53 A where you are going to report the IT investment and use the next sequential number as your four digit identification number.

> **DOE Guidance:**
> The DOE OCIO will assign the OMB unique project identifier (UPI) number for new major investments. For new non-major investments, the organization's CIO/Senior IT Manager assigns the OMB identifier number. If you need a UPI number for a new major investment, or if you are uncertain who to contact within your organization to receive a UPI for a new non-major investment, please contact the eCPIC help desk at (202) 586-5437.
>
> For organizational CIO/Senior IT Managers, a more detailed explanation of OMB Unique Project Identifier coding is provided in the eCPIC User Guide for OMB Exhibit 53 reporting that is provided during eCPIC training.

xxx-xx-xx-xx-xx-xxxx-**XX**

These two digits identify the investment category of the investment you are reporting. Select one of the following two digit codes according to what you report on the title line:

00 = Total investment title line, or the first time the agency is reporting this particular investment.
24 = E-Gov initiatives or an individual agency's participation in one of the E-Gov initiatives.
48 = Other than E-Gov initiatives, any multi-agency collaboration or an individual agency's participation in one of the multi-agency initiatives.
04 = Funding source or appropriation
09 = Any subtotal

> **DOE Guidance:**

Consolidated Investments: Investments included in consolidated business cases should use the **04** suffix code denoting a funding source line item for the consolidated investment.

Change in Investment Status: This field is used when an investment in PY or CY portfolio has a change in status (i.e. downgraded to non-major, eliminated, retired, consolidated, split) for the CY or BY. The change of status should be indicated with one of the following reasons: 1) Downgraded to non-major because it does not fit the criteria for Major investment in FY 2012, or because of insufficient activities or funding, 2) In FY 2012 this consolidated investment is no longer included in Major Investments, due to the split up into separate component investments 3) In FY 2012 this investment is no longer a major investment, due to consolidation of activities into another investment 4) Investment was subject to agency-wide realignment of the IT portfolio, 5) Investment was retired, 6) Investment was eliminated or 7) Upgraded to Major Investment, 8) Other, 0)None.

Agency Description of Change in Investment Status (limited to 255 characters): This field is used when an indicator has been chosen for "Change in Investment Status" to provide more description of the rationale for the change which could include impacted UPIs, reference to legislation, or governance board decision dates.

Investment Title: Means a definitive title explaining the investment. If the investment title has changed, include the previous name in parentheses. Follow the DOE IT investment naming convention by starting each investment title with the prefix of the sponsoring organization (current prefixes are shown in Appendix A).

Investment Description: For each investment (major, migration, partner contribution and non-major), provide a project description of 255 characters or less. The description should explain the investment, its components, and the functionality that it provides. This description should be understandable to someone who is not an expert of the agency. If the investment is part of a multi-agency initiative or part of another business case, please provide a description of where that business case is located in the appropriate agency budget submission (i.e. managing partner UPI). For example, if the investment represents your agency's participation in one of the Presidential initiatives, the description should state that this investment represents your agency's participation in one of the Presidential initiatives and should refer to the UPI of the managing partner's business case.

Investment Long Description: This field of 2500 characters may be used to expand on the short description field discussed above for each non-major investment.

It is recommended that if the investment includes the development of significant new functionality (i.e. system capabilities that enhance the ability to perform the BRM functions / sub-functions and or SRM services listed) supported by DME funding, the details of this new functionality should be included in the description. These details will help promote collaboration and reuse opportunities throughout DOE.

Note: Investment details described in the Investment Long Description will be for DOE internal use only and will not be transmitted to OMB. *Because Exhibit 300 Business Cases require significant details and justification, the Investment Long Description does not apply to major investments.*

Primary Federal Enterprise Architecture (FEA) Mapping – Line of Business: These three digits identify the primary Line of Business from the Federal Enterprise Architecture Business Reference Model (BRM) that this IT investment supports. BRM Line of Business codes may be found at http://www.whitehouse.gov/omb/e-gov/fea/

Primary Federal Enterprise Architecture (FEA) Mapping – Sub-function: These three digits identify the primary Sub-Function from the Federal Enterprise Architecture BRM that this IT investment supports. BRM Sub-functions may be found at http://www.whitehouse.gov/omb/e-gov/fea/.

> **DOE Guidance:** Investments must be mapped to both the SRM and the BRM models. Enter at least one mapping for both the BRM (the BRM mapping must be the investment's Primary FEA mapping) and SRM models (total of at least two mappings) and ensure that the BRM mapping is identified as the Primary to be transmitted to OMB. Please make sure that *both* the BRM and the SRM information are entered. The BRM and SRM definitions may be found at http://www.whitehouse.gov/omb/e-gov/fea/.
>
> Note: The FEA Consolidated Reference Model (CRM), which contains BRM, SRM, and Technical Reference Model information, is updated on an annual basis; however, the updates are not automatically reflected in individual investments in eCPIC. Therefore, project managers should review the current mappings each year to ensure the mappings are still contained in the CRM drop-down options. Investment owners should review and consider the primary business function/service component provided when determining the appropriate mappings.
>
> Note: The primary FEA mapping acts as the principal determinant of an investment's alignment to an agency segment architecture (described under the heading "Segment Architecture" on page 13 of this document), which is required of all investments. See Appendix F for more information on establishing a Segment Architecture mapping based on the investment's Primary FEA mapping.

Secondary FEA (BRM and SRM) Mapping – Line of Business or Service Type: These three digits identify the secondary Line of Business or Service Type from the Federal Enterprise Architecture that this IT investment supports. Regardless of whether a BRM or SRM mapping was specified as the Primary FEA mapping, please also specify as many BRM Line of Business and SRM service type mappings as are applicable to the investment. BRM Line of Business and SRM component codes may be found at http://www.whitehouse.gov/omb/e-gov/fea/.

Secondary FEA (BRM and SRM) Mapping – Sub-function or Service Component: These three digits identify the secondary Sub-Function or Service Component from the Federal Enterprise Architecture that this IT investment supports. Regardless of whether a BRM or SRM

mapping was specified as the Primary FEA mapping, please also specify as many BRM Sub-function and SRM service component mappings as are applicable to the investment. BRM Sub-functions and SRM components codes may be found at http://www.whitehouse.gov/omb/e-gov/fea/.

> **Note:** For additional information on how to enter information related to the Secondary FEA (BRM or SRM) Mappings please review the latest Electronic Capital Planning Investment Control (eCPIC) User Guide located in the eCPIC Resource Library.

Core Financial System Percentage: Portion of the investment's funding associated with the core financial system of record that maintains all transactions resulting from financial events.

Funding Amount for Homeland Security Presidential Directive-12 (HSPD-12): Amount of this investment's PY/2010 funding associated with the agency's HSPD-12 implementation.

Homeland Security Priority Identifier: Determines if an IT investment supports the homeland security mission. Determine whether or not your investment supports the Department of Homeland Security (DHS) mission areas by using the objects and goals below. If the investment supports one of these mission areas, indicate which one(s) by listing the corresponding number(s) listed below. If the investment does not support homeland security, please leave blank:

> (1) Intelligence and warning
>
> (2) Border and transportation security
>
> (3) Defending against catastrophic threats
>
> (4) Protecting critical infrastructure and key assets
>
> (5) Emergency preparedness and response
>
> (6) Other
>
> (0) None

> > **DOE Guidance:** Based on guidance from the Office of the CFO, only Program Offices included in the DOE Safeguards and Security crosscut budget may identify Homeland Security goals support for their investments. Offices eligible to use these codes are: NNSA, EM, HSS, NE, SC, and IM.

Is this Investment Accounted for the in Agency Data Center Consolidation Plan (yes/no): Indicate whether or not the investment was included in the DOE Data Center Consolidation Plan that was submitted to OMB.

Cross-Boundary Information Sharing Identifier (1 digit code): Indicate if the investment is sharing data that crosses a bureau or agency boundary, including information sharing with international, State, local, tribal, industry, or nongovernmental organization partners. If the investment supports reusable, standardized information exchanges indicate which: 1) NIEM, 2) UCORE, 3) XBLR, 4) Other 0) None.

Supports Information Sharing and Access (select all that apply): Means an IT investment supporting the information sharing and access mission areas of: 1) the national network of State and major urban area fusion centers; 2) Interoperability across Sensitive but Unclassified Networks targeting federal, state, local, and tribal law enforcement, public safety, homeland security, and intelligence personnel; 3) Classified National Security Information Program for State, local, tribal, and private sector partners; 4) National Suspicious Activity Reporting Initiative; 5) Controlled Unclassified Information; 0) None. If the investment supports one of these mission areas, indicate which one(s) by listing the corresponding number(s) listed above.

Data.gov Integration Identifier (1 digit code): Means an IT investment that creates value by publishing data sets through Data.gov as described in the Data.gov Concept of Operations. Specifically, value is created by publishing data sets that 1) drive market participant accountability by describing participant behavior or attributes; 2) enable information-centric markets by ensuring producers and consumers have the maximum appropriate information to inform their purchase decisions; 3) support Federal accountability by revealing the results and characteristics of government services to citizens; 4) improve government efficiency and effectiveness by releasing information about how Federal agencies conduct financial management or manage resources; and 5) promote the connected citizen by sharing information about the policy, rulemaking, and public engagement process; 0) none, the investment does not publish data through Data.gov. If the investment uses or publishes data through Data.gov, indicate the targeted value creation mode by listing the corresponding number.

Development/Modernization/Enhancement (DME) : The program cost for new investments, changes or modifications to existing systems to improve capability or performance, changes mandated by the Congress or agency leadership, personnel costs for project (investment) management, and direct support. For major IT investments, this amount should equal the sum of amounts reported for planning and acquisition plus the associated FTE costs reported in the Exhibit 300.

Steady State (SS): The maintenance and operation costs at current capability and performance level including costs for government and contractor personnel, maintenance of existing information systems, corrective software maintenance and refresh, voice and data communications maintenance, and replacement of broken IT equipment. For major IT investments, this amount should equal the amount reported for maintenance plus the associated FTE costs reported in the Exhibit 300.

Break-out of DME and SS Funding Requests by PY, CY, and BY: Investments should break-out DME and SS funding requirements for PY, CY, and BY into the following categories as applicable:

> **Agency Funding:** Reports the agency's funding authority for a given investment for PY (2010) and CY (2011). The funding authority should break-out DME and SS funding for 2010 and 2011.

Contributions (PY) /Expected Contributions (CY): Includes both monetary contributions and fees for services provided by partner agencies to managing partners or shared service providers of a Multi-agency collaboration. Contributions should only apply to Multi-agency collaboration. Actual contributions should be reported for PY (2010), as well as expected contributions for CY (2011).

Funding by End User Systems and Support (EUSS), Mainframes and Servers Services Support (MSSS), Telecommunications Systems and Support (TSS), IT Security, Business Solutions, and IT Practices & Management: For every investment reported in the Exhibit 53 A, report how much BY 2012 DME and SS funding is required (in millions of dollars) to fund each of the five categories below. Descriptions of each category are provided. The total amount of the five categories should equal the BY 2012 funding request for the investment.

Category	Description
1. End User Systems and Support (EUSS)	End user hardware (desktop, laptop, handheld devices), peripherals (local printers, shared printers), and software (PC operating systems, office automation suites, messaging and groupware), and hardware and software for help desks.
2. Mainframes and Servers Services Support (MSSS)	Mainframes and servers including web hosting (but not Web content development and management), hardware and software operations, licenses, maintenance, back-up, continuity of operations, and disaster recovery. Also includes electronic messaging and storage.
3. Telecommunications Systems and Support (TSS)	Telecommunications (including wireless, multimedia, and local and long distance telephony) hardware and software operations, licenses, maintenance, back-up, continuity of operations, and disaster recovery. Also includes network operations command centers and wire closets and cable management.
4. IT Security	Involves all functions necessary to meet federal Information Security policy requirements. Includes development, implementation and maintenance of security policies, procedures and controls across entire information life cycle. This includes C&A, Security Awareness training (but not the infrastructure required for the delivery of training), FISMA compliance reporting, development of security policy, and security audits and testing. Does not include physical protection of facilities such as that in "Critical Infrastructure Protection" or "CIP".
5. Other Business Solutions and IT Practices & Management	Other Business Solutions: Comprised of software application, systems, services and the people, processes, commercial contracts, overhead occupancy, and technology that are used to acquire, manage, manipulate, display and compile information and data in direct and indirect support of the mission of the Department. IT Practices & Management: Programmatic and service costs of the people, processes, commercial contracts, overhead occupancy, technology and services. Examples include: enterprise architecture program costs, investment management program costs, and other IT management costs.

Funding Source(s) and Amounts: For all investments **(major and non-major investments),** provide the source of funding by identifying the OMB Account Code(s) associated with the investment amount(s) that should be attributed to each source. **For each reported year, the sum of all funding source(s) amounts for an investment must equal its total investment costs.**

OMB Account Code Format:

Agency Code	Bureau Code	Account Symbol	Suffix
019	XX	XXXX	00

DOE's Agency Code is 019, the Bureau Code is found in Appendix C, and the Account Symbol is equivalent to the 4-digit section of the Appropriations Code. For further assistance, see your Program Budget Officer.

For the purposes of Exhibit 53 A only, funding sources should continue to utilize the "-9" suffix to flag funding from the American Recovery and Reinvestment Act of 2009 (ARRA).

Program Office: Select a Program Office for each investment. If you do you see your Program Office please contact the eCPIC Helpdesk at (202) 586-5437 or via email at eCPIC@hq.doe.gov.

DOE Location: Select the DOE location where this investment's work is performed. If you do not see your location please contact the eCPIC Helpdesk at (202) 586-5437 or via email at eCPIC@hq.doe.gov.

Segment Architecture: For each investment, enter the six-digit segment code representing the agency segment architecture that the investment supports. A segment architecture represents an agency's primary business and/or capability area. The investment's primary FEA mapping acts as the principal determinant of alignment to an agency segment architecture. Appendix F provides additional guidance on segment architecture codes.

4. Exhibit 53 B Component Descriptions and Instructions

Beginning in BY 2012, OMB Circular A-11 requires agencies to report an Exhibit 53 B, Agency IT Security Portfolio. Summary totals for each federal organization and their direct support contractors are to be submitted to the Office of the CIO for consolidation into a single Departmental summary report. Laboratory and M&O contractor managed IT security costs are not to be reported on the DOE Exhibit 53 B. Appendix H provides an example of the Exhibit 53 B template. A description of each of the data fields in the Exhibit 53 B is provided below.

Row	Required Data Element	Description
1	Agency Code	Three digit agency identifier (see Appendix C)
2	Number of Government FTEs with information security responsibilities	Report number of Government employees with information security responsibilities, including the fractional portion of those who devote a percentage of their time to these responsibilities. This count should include but not be limited to Designated Security

Row	Required Data Element	Description
		Officers, Network security staffs, System Administrators, and system owners and should not include individuals responsible for physical security such as guards. The number should be rounded to two decimal places.
3	Average cost per Government FTE	Using the salary information of the Government employees counted in "Number of Government FTE with Security Responsibilities" calculate an average fully loaded cost per Government FTE. The average cost should be represented in dollars and rounded to two decimal places.
4	Number of contractor FTEs with information security responsibilities	Report the number of contractor staff with information security responsibilities including the fractional portion of those who devote a percentage of their time to these responsibilities. The number should be rounded to two decimal places.
5	Average cost per Contractor FTE	Using the billing rate of the contract staff counted in "Number of contractor FTEs with information security responsibilities" calculate an average yearly cost per contractor FTE. The average cost should be represented in dollars rounded to two decimal places.
6	Total IT Security Tools Costs	This row is calculated by adding Rows 6-13, IT Security software and tools licensing costs.
7	Anti-Virus Software Licensing Costs	Report the licensing costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. If an agency does not purchase anti-virus software separately from anti-malware software, please enter all costs on the line for anti-malware and leave this line blank.
8	Anti-Malware Software Licensing Costs	Report the licensing costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar.
9	Intrusion Detection Systems Licensing Costs	Report the licensing costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. If you have an IDS which is part of an Intrusion Prevention System (IPS), please include all costs in IPS and do not list here. Please include the amount paid for the Managed Trusted Internet Protocol Service via the Networx contract, as well as any other operational IDS.
10	Intrusion Prevention Systems Licensing Costs	Report the licensing costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar.
11	Web Filtering Software Licensing Costs	Report the licensing costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar.
12	Email Filtering Software	Report the licensing costs incurred or expected to be incurred for the respective budget year. If an agency does not purchase email filtering software separate from web filtering software, please include all costs in web filtering software and do not list here. Costs should be reported in thousands and reported to the dollar.
13	SIM/SIEM tools	Report the tool costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar.

Row	Required Data Element	Description
14	Data Leakage Protection tools	Report the tool costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar.
15	Costs for NIST 800-37 implementation	Report the costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. Certification and Accreditation costs should only include contract costs.
16	Number of systems scheduled for activities represented in Row 15.	Number of systems used to in cost calculations for "Costs for NIST 800-37"
17	Costs for annual FISMA testing	Report the costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. Please include all costs including licensing of tools, services and FTEs.
18	Costs for network penetration testing activities	Report the costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. Please include all costs including licensing of tools, services and FTEs
19	Security awareness training costs	Report the costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. This should include the costs of annual security awareness training required by the FISMA Act.
20	Security training costs for employees with significant security responsibilities	Report the costs incurred or expected to be incurred for the respective budget year. Costs should be reported in thousands and reported to the dollar. This does not include the annual awareness training.

5. Cost Estimation

    a. Identify Cost Types
Identify estimated costs associated with each investment for three years—PY 2010, CY 2011 and BY 2012. For each year, determine the cost break down between development and steady state costs as defined below:

- **Development/Modernization/Enhancement (D/M/E)** refers to the cost for new investments and changes or modifications to existing investments to improve capability or performance. Costs may include costs of mandated changes, costs of project management, personnel costs, and direct support costs.
Note: Both **Planning** and **Full Acquisition** costs listed on the Summary of Funding table in the Exhibit 300 are considered part of D/M/E.

- **Steady State** refers to maintenance and operation costs at current capability and performance levels, including costs for personnel, maintenance of existing investments, corrective software maintenance, voice and data communications maintenance, and equipment refresh.
Note: Maintenance costs listed in the Summary of Funding table in the Exhibit

300 fall under the category of Steady State.

For each reported year, the total planned costs of an investment must equal the sum of the development and steady state amounts.

b. **Identify Funding Source(s) and Amounts**
Identify the source of funding for IT investments by identifying OMB Account Code(s) associated with investment amount(s) that should be attributed to each source. For each reported year, the sum of all funding source(s) amounts for an investment must equal its total investment costs.

For investments supported by multiple organizations, the program leading the effort will provide a single Exhibit 53 A investment entry in eCPIC. To avoid double counting, no other organization that contributes to a collaborative investment will generate an eCPIC record for their portion of the investment (except for Common Operating Environment and Consolidated Infrastructure investments). Each contributing program must ensure that its share of the total investment cost is reported to the lead program for inclusion in the Exhibit 53 A report.

6. Infrastructure, Office Automation and Telecommunications Investments

Department-wide IT programs for office automation and telecommunications should be coordinated through an agency-wide process and reported in September as a single business case for the Department. This section of the guidance should be used by DOE program offices and laboratories when collecting and reporting their Exhibit 53 data under the Consolidated Infrastructure, Office Automation and Telecommunications (IOAT) investment portfolio.

a. **Investments to Include in the Consolidated Infrastructure Portfolio**
OMB has provided a broad description of what types of investments and activities should be included within the consolidated business case. DOE previously took the guidance from OMB and developed six areas of technical consolidation. OMB has identified three categories for reporting consolidated infrastructure investments. Appendix D provides a crosswalk to illustrate how the three categories align with DOE's six service lines.

b. **Investments to Exclude from the Consolidated Infrastructure Portfolio**
IOAT is not inclusive of ALL IT systems and network services. Consolidated IOAT does not include:
   o SECRET infrastructure or data storage facilities.
   o Research and Development
   o Scientific research and advanced science research computing

- o Mission critical development, testing, experimentation, modeling, or the like environments as they apply to program specific mission objectives. (e.g. ESNet is not included under IOAT)
- o MAJOR HR or ERP implementations as described in OMB Guidance.

c. Exhibit 53 Reporting Requirements

Review Sub-Investments Submitted in BY 2011 Portfolio
When preparing the non-major consolidated investment, each site/location should review the infrastructure sub-investments that were submitted in the BY 2011 portfolio. This information should be used to determine if new investments should be added or deleted from the list.

Classify and Name Sub-Investments by Organizational Code and Service Lines
Investments should be categorized and classified by sponsoring organization and service line. The following naming convention should be used when entering investment information:

- o The first part of the naming convention should identify the organizational code for the sub-investment.

- o The second part of the naming convention should identify the service line associated with the sub-investment. If multiple sub-investments exist within the same organization and service line, then a descriptive suffix should be added. (Example: RL Telecommunications Networks Main LAN, RL Telecommunications Networks Testbed LAN)

Each OMB infrastructure category per site/location should be submitted as a separate non-major investment, resulting in, if applicable, a maximum of five non-major investments for each site/location under the PMO area of responsibility. If sites have multiple significant efforts within a single category, each effort should be identified as a non-major investment with a short description that explains the distinction among the efforts.

Classify Sub-Investments by OMB Infrastructure Category

OMB has identified three categories for reporting consolidated infrastructure investments. Appendix E provides a crosswalk to illustrate how the three new categories align with DOE's six service lines.

Each consolidated infrastructure investment should identify the OMB infrastructure category it is related to by selecting the two letter code provided below from the picklist in the OMB Infrastructure data field found on the first page of the Exhibit 53 for consolidated infrastructure investments form.

- End User Systems and Support = ES

- Mainframes and Servers Services and Support = MS
- Telecommunications Systems and Support = TS
- Cyber Security= CS
- Other = OT

For example, if a consolidated infrastructure investment is currently classified under the Office Automation service line, it should select "ES" from the picklist.

All Exhibit 53 data submitted by the program offices and laboratories will be aggregated by the IOAT Integrated Project Team (IPT) and reported under the Consolidated IOAT Exhibit 300 in the BY 2012 budget submission.

For those offices at headquarters that obtain Common Operating Environment services, only report **one non-major investment** for COE services at headquarters.

> **Note:** The requirement is intended to ensure that all of these investments are integrated into an overall strategy that is consistent with the Department's strategic direction and allows for the possible consolidation and integration across the enterprise. The requirement is not intended to imply that every individual investment included in the IOAT program is implemented centrally by the agency-level CIO organization.

7. Homeland Security Presidential Directive 12 (HSPD-12) Investments

Similar to the process for reporting Department-wide IT infrastructure investments, HSPD-12 investments should be reported in September as a single business case for the Department. This section provides guidance to DOE program offices when collecting and reporting their HSPD-12 investments in the Exhibit 53 A.

a. Investments to Include in the Consolidated HSPD-12 Portfolio: Each location requiring funding for HSPD-12 planning and implementation activities for federal activities and assets should report a single investment for each of the following four categories:

- Card Issuance and Maintenance
- Back-end Infrastructure
- Physical Security Access Controls
- Logical Access Controls Systems

b. Exhibit 53 A Reporting Requirements

Classify and Name Sub-Investments by Organizational Code, Location, and HSPD-12 Category

Investments should be categorized and classified by sponsoring organization, location and HSPD-12 category. The following naming convention should be used when entering investment information:

- The first part of the naming convention should identify the organizational code for the sub-investment, such as SC, EM, etc.

- The second part of the naming convention should identify the location acronym of the sub-investment, such as CH, RL, etc.

- The final part of the naming convention should identify the HSPD-12 category associated with the sub-investment. (Example: SC CH Card Issuance and Maintenance, EM RL Physical Security Access Controls)

Each HSPD-12 category per site/location should be submitted as a separate non-major investment, resulting in, if applicable, a maximum of four non-major investments for each site/location for HSPD-12 investments. This is only applicable to investments in the "federal space" or that are directly funded under federal program portfolio. For example, if NNSA (NA-70) were to fund Card Issuance and Maintenance for all of the NNSA sites and contractor population, there would be one Exhibit 53 A investment with the appropriate funding targets. Alternatively, if an NE site, such as the Idaho National Laboratory, had projects to modify their existing Logical Access Control Systems using indirect funding allocated by the laboratory for IT services, the Exhibit 53 A would not be necessary.

To ensure all investments are accurately reported and selected into the HSPD-12 portfolio, please send an email to Ray Holmer at Raymond.holmer@hq.doe.gov with a cc: to Fred Catoe frederick.catoe@hq.doe.gov and Dan Young Dan.young@hq.doe.gov with a list of the HSPD-12 investments that are required at your locations.

8. Data Entry

The next part of the reporting process is data entry followed by data submission. This section describes the mechanisms for using eCPIC to capture the IT investment data and submitting it to the Office of the CIO.

a. Use eCPIC to Maintain And Report on IT Investment Data
For BY 2012, all DOE organizations will enter all their IT reporting data, including both Exhibit 53 and Exhibit 300 business case data, into the Electronic Capital Planning and Investment Control (eCPIC) system. In addition to this document, the Office of the CIO will provide training, instruction manuals, and telephone help desk services for the use of eCPIC.

For information on how to access eCPIC, please contact the eCPIC help desk at (202) 586-5437. Prospective system users should attend eCPIC training prior to using the

system.

b. Enter Exhibit 53 data
As a trained eCPIC user, update existing investment data records or create new investment records, following instructions provided in training and in the eCPIC User Guide for OMB Exhibit 53 Reporting.

c. Prepare a "Capital Asset Plan And Business Case" (Exhibit 300) for Each Major Investment
For each major IT investment, prepare an Exhibit 300 business case data that demonstrates a direct connection to the DOE strategic plan, adequate justification for selecting the chosen alternative, sound acquisition (program and procurement) planning, comprehensive risk mitigation and management planning, and realistic cost and schedule goals and measurable performance benefits. Submitters will use eCPIC to update existing business cases and/or enter new ones, following instructions provided in training and in the eCPIC User Guide for OMB Exhibit 300 reporting.

9. Data Submission Logistics

This section describes the logistics for how and when investment owners will submit their data to their lead programs and how and when lead programs will submit their portfolios to the Office of the CIO and the Chief Financial Officer.

By the due date provided in the table below, each organization CIO or senior IT manager who owns a portfolio of IT investments in eCPIC will be responsible for updating, reviewing and certifying via email to DOE CPIC mailbox at DOE.CPICmailbox@hq.doe.gov that their organization's submission is complete and ready for OCIO review. After undergoing OCIO review, submitters will be notified if the submission is satisfactory or if further modifications are necessary.

The proposed dates are subject to change, pending final guidance from the Office of the Chief Financial Officer, the Cyber Security Governance Council, and the Office of Management and Budget.

Due Date	Responsible Party	Action
7/23/2010	Headquarters, eCPIC Investment owners, and Portfolio owners	Preliminary Program and Staff Office BY 2012 Exhibit 300s and Exhibit 53s (minus M&O investments) due to the OCIO. Send a confirmation email to the DOE CPIC mailbox at DOE.CPICmailbox@hq.doe.gov. Include the name(s) of the submitted portfolios and Exhibit 300s.
8/13/2010	Headquarters, eCPIC Investment owners, and Portfolio	Program and Staff office eCPIC Portfolio revisions based on Exhibit 300 and Exhibit 53 Performance Improvement Plans. A confirmation email to the DOE CPIC mailbox at DOE.CPICmailbox@hq.doe.gov is

Due Date	Responsible Party	Action
	owners	required. Include the name(s) of the completed portfolio(s) and Exhibit 300s.
8/16/2010	OCIO	Lock out all users from the eCPIC application and make revisions of all portfolios and investments from the BY 2011 to the BY 2012 template to incorporate new BY 2012 questions into eCPIC.
8/25/2010	Headquarters, eCPIC Investment owners, and Portfolio owners	Provide responses to new BY 2012 Exhibit 53 questions (in advance of draft submission to OMB)
8/26/2010	OCIO	Generate and validate draft BY 2012 Exhibit 53
8/27/2010	OCIO	OCIO to submit draft BY 2012 Exhibit 53 A to OMB for system testing and portfolio validation against new BY 2012 reporting requirements.
9/8/2010	Headquarters and eCPIC Portfolio Owners	All Final submissions due to the OCIO. A confirmation email to the DOE CPIC mailbox at DOE.CPICmailbox@hq.doe.gov is required.
9/8/2010	Headquarters, eCPIC Portfolio Owners, and eCPIC Investment Owners	All users will be locked out of the eCPIC application. All entries and updates to investments within eCPIC must be made by close of business.
9/13/2010	OCIO	Final BY 2012 Exhibit 53 submitted to OMB's IT Dashboard
9/17/2010	OCIO	Final BY 2012 Exhibit 300s submitted to OMB's IT Dashboard

Appendix A: Current DOE Investment Prefixes for eCPIC Investment Names

Alphabetic Listing of Prefixes	
AMES	NA
ANL	NE
BJC	NREL
BNL	NETL
CBC	OH
CBFO	OH BWXT
CF	OE
CI	OR
CH	ORAU
CST	ORISE
ED	ORNL
EE	OSTI
EIA	PA
EM	PI
EM HQ	PNNL
FE	PPPL
FNAL	RFFO
GC	RF KH
GJO	RL
HG	RL HEHF
HQ	RL PHMC
HR	RL RCP
HSS	RL RPP
ID	RL WTP
IG	SC
IM	SEPA
INL	SLAC
JLAB	SPRO
LBL	SR
LM	SWPA
MA	WAPA

Note: If you find that a code is missing from the above prefixes list, please contact the eCPIC system administrator (eCPIC@hq.doe.gov or 202-586-5437) so that it can be added.

Appendix B: DOE Mission Areas

Mission Area	Unique Mission Area Code
Civilian Radioactive Waste Management (RW)	20
Electronic Delivery and Energy Reliability (OE)	32
Energy Efficiency & Renewable Energy (EE)	12
Energy Information Administration (EI)	13
Environmental Management (EM)	15
Financial Management (See Appendix G for definition)	01
Fossil Energy (FE)	16
Health, Safety, and Security (HSS)	22
Inter-Agency Projects	99
Legacy Management (LM)	31
National Nuclear Security Administration (NA)	11
Nuclear Energy (NE)	18
Other Corporate Management Investments (This Mission Area encompasses all non-financial IT investments of IM, CF, HR, MA and other DOE Staff Offices)	17
Power Marketing Administrations (This Mission Areas encompasses all non-financial IT investments of the following PMAs: WAPA, SWPA, and SEPA)	23
Science (SC)	21

Appendix C: OMB Bureau Indicators

The table below indicates the OMB Bureau that is normally associated with each organization. There may be exceptions in certain cases. If you believe that an exception is required for one of your investments, please send an email to the DOE CPIC mailbox, via e-mail at DOE.CPICmailbox@hq.doe.gov to ensure the preferred bureau is selected.

Organization	Associated OMB Bureau	Bureau Code
NA	National Nuclear Security Administration	05
EM, RW, LM, HSS	Environmental and Other Defense Activities	10
EE, EIA, FE, NE, OE, SC	Energy Programs	20
SEPA, SWPA, WAPA	Power Marketing Administration	50
CN, GC, HG, IG, IM, CF, HR, MA, PA,	Departmental Administration	60
Any	Inter-Agency Projects	99

Appendix D: Infrastructure Service Line Definitions and Examples

OMB Infrastructure Categories	DOE Service Line	Definition	Example
Telecommunications Systems and Support	**Telecommunications Networks**	All IT investments required to support network communications between Wide Area Networks (WAN), Metropolitan Area Networks (MAN), Campus Area Networks (CAN), and Local Area Networks (LAN). All IT investments required to provide networking services within a building, campus, data center or Center, including hardware, software, and services (including wireless LANs, remote access, Domain naming services, network management, X500/directory services).	• Commercial ISP (WANs) • Agency WAN • Converged Voice/video/data networks • Wide Area Networks • Metropolitan Area Networks • Campus Area Networks • Local Area Networks • Internet access services • Maintenance (COTs and SLAs) • NOCs / NMCs
	Telephony Services	All elements that provide voice services to users including hardware, software, services and communications.	• Telephones local and long distance services • 2-way radio • Cell Phones Services • Facsimile Services • FTS services • International services • Voice Teleconferencing • Calling cards • 800 # service • Voice over IP • PBXs • Voice mail • Public Address (PA) • Emergency Warning System • Satellite Phones • Unified messaging • Wireless support

OMB Infrastructure Categories	DOE Service Line	Definition	Example
Mainframes and Servers Services and Support	**Application & Data Hosting/Housing**	Application services provide an end service to end-users. Application services include the development, operations and maintenance of applications that are not desktop services. Includes IT investments in hardware (not a part of a datacenter), software and services required to provide application services remote from a desktop and not provided by a Data Center. This includes design, development, help and other support, operations and maintenance. A data center is a collection of IT hardware and software that is used for multiple purposes, and often related to, computing services. Furthermore, these resources are usually funded and operated as a shared resource with management dedicated to operating the center. Mass storage systems should be included as a data center unless the mass storage is integrated into some other IT facility. Includes: • Data storage (digital data storage services, including hardware, software and services) • Web services provided to citizens by the Agency (all costs: HW/SW, design maintenance and support) • Externally focused websites (not internally focused websites) • IT investments to support software engineering services	Includes but is not limited to: • Application hosting/housing • Application development • Database hosting/housing • Database development • Datacenters • e-Forms • Standard Agency-wide Administrative Systems • Web services internal to Agency or Bureau (to include GP applications with a web front-end) • General Purpose IT Support of Missions/Projects • IT Support for Centralized Services (data center, servers, mass storage, web services, e-mail, etc.) • Center Web Services • Public Web Portal • Data dictionary (XML and other) and directory services focused on facilitating web access to information • Integrated development Environments • Requirements Development and Management • Software Configuration Management • Software / System Test Modeling
	Enterprise Collaboration Services	All investments required to support video and video distribution and video conferencing services used by the Agency or Bureau to include hardware, software and support services - not including LAN or WAN. IT investments to provide email, instant messaging, and collaborative tools.	• Video Services • Administrator Video • VITS • Digital video production equipment/facilities • Conference Room A/V support • Video distribution systems, Digital TV (DTV) Project and HDTV • All Email, Calendaring • Wireless PDA/Handheld (i.e.: Blackberry) • Pagers • Advanced Engineering Environment (AEE)

OMB Infrastructure Categories	DOE Service Line	Definition	Example
			• Electronic Work Environment Initiative • Video over IP • ISOWAN • Center E-mail • WebEx • E-Room • Secure video • Audio conferencing
End User Systems and Support	**Office Automation**	Desktop computing services to users to include all general purpose, desktop computing hardware and software (OS, applications and utilities) components and services (including design, build, operations, support, and maintenance services). Includes peripherals/printers and multipurpose help desks. Does not include email, calendaring client and servers, and desktops whose primary use is mission specific.	• Desktop computers • Laptop computers • Suites software • Graphics software • IT asset management • Network peripheral devices • Admin – Policy/Procedures • Software licensing • Help Desk • Operating systems • Software (e.g., word processing, spreadsheet, presentation, project management, browser, etc.)
	Cyber Security	All IT investments to provide shared security services.	• Certificates / Digital Signatures • Digital Certificate Authentication • SSL • Platform/Desktop Firewalls services • Platform/Desktop Antivirus Services • Scanning/Penetration Tests • Desktop Personal Firewall • Supporting Security Services • Firewalls specify policies about what traffic may or may not enter a particular computer network. • An IDS (Intrusion Detection System) monitors patterns of traffic and signals an alert once it deems that an attack has taken place. An IDS can be network-based or host-based, passive or reactive, and can rely on either misuse detection or anomaly detection.

Appendix E: Guidance for Reporting American Recovery and Reinvestment Act (ARRA) Funding and Activities

While it is required to report IT-related ARRA funding and activities in eCPIC, investment owners should confirm this information with the appropriate budget office representative prior to entering it into eCPIC as per the guidance below.

Exhibit 300s

There are various sections in the Exhibit 300 that will require updating if an IT investment is receiving ARRA funding. The sections, as well as guidance for completing each question, are summarized below:

Question I.A.8: Summarize how funding will be used to achieve overall program and investment goals. Indicate what additional outcomes will be realized as a result of the additional stimulus funding.

Question I.B (Summary of Funding Table): Indicate the total amount of funding that will be provided to the IT investment, including ARRA funding, in the Summary of Funding table.

Question I.B (Funding Sources Table): Identify the funding source code for the additional ARRA funding.

Question I.D.1.a: Performance Information: Identify the performance improvements that will occur directly as a result of the ARRA funding.

> Major investments are currently required to identify four performance metrics per year: Mission and Business Results; Customer Results; Processes and Activities; and Technology.
>
> Enter additional metrics to show the performance outcomes directly related to the additional ARRA funding. For the strategic goal question, select the ARRA objective that is being supported by the performance improvement to illustrate the performance related to ARRA funding.

Question II.B: Cost and Schedule Performance: Report the cost and schedule milestones directly related to the ARRA funding.

> For the ARRA funding, report cost and schedule milestones to indicate how the funding will be used. For all ARRA-related milestones, insert an "ARRA" prefix in front of the milestone description.
>
> Ensure the total annual cost of the milestones equals the totals reported for the same years in the Summary of Funding table.

Exhibit 53s:

(Funding Sources Table): Identify the funding source code for the additional ARRA funding.

Appendix F: Agency Segment Architecture Mapping Guidance

The following table provides guidance for establishing a DOE Enterprise Architecture Segment mapping based on an investment's primary Federal Enterprise Architecture Business Reference Model mapping. Please use the file to ensure that your investments' Primary FEA (BRM) mappings and six-digit segment architecture mappings are in alignment.

Six Digit BRM Code	FEA BRM Line of Business	FEA BRM Sub-Function	Segment Name	Segment Code
107019	Energy	Energy Supply	Energy Management and Security	100-000
107021	Energy	Energy Resource Management	Energy Management and Security	100-000
107022	Energy	Energy Production	Energy Management and Security	100-000
107020	Energy	Energy Conservation and Preparedness	Energy Management and Security	100-000
104008	Disaster Management	Disaster Preparedness and Planning	Environmental Management	105-000
108023	Environmental Management	Environmental Monitoring and Forecasting	Environmental Management	105-000
108024	Environmental Management	Environmental Remediation	Environmental Management	105-000
108025	Environmental Management	Pollution Prevention and Control	Environmental Management	105-000
103210	Defense and National Security	Strategic National and Theater Defense	Defense and National Security	110-000
103211	Defense and National Security	Operational Defense	Defense and National Security	110-000
111034	Homeland Security	Key Asset and Critical Infrastructure Protection	Defense and National Security	110-000
106016	Education	Higher Education	Scientific Research	115-000
109026	General Science and Innovation	Scientific and Technological Research and Innovation	Scientific Research	115-000
109027	General Science and Innovation	Space Exploration and Innovation	Scientific Research	115-000
116053	Litigation and Judicial Activities	Legal Investigation	Administrative Management	200-000
301091	Controls and Oversight	Corrective Action	Administrative Management	200-000
301092	Controls and Oversight	Program Evaluation	Administrative Management	200-000
301093	Controls and Oversight	Program Monitoring	Administrative Management	200-000
302094	Internal Risk Management and Mitigation	Contingency Planning	Administrative Management	200-000

Six Digit BRM Code	FEA BRM Line of Business	FEA BRM Sub-Function	Segment Name	Segment Code
302095	Internal Risk Management and Mitigation	Continuity of Operations	Administrative Management	200-000
304104	Planning and Budgeting	Strategic Planning	Administrative Management	200-000
306112	Regulatory Development	Policy and Guidance Development	Administrative Management	200-000
306113	Regulatory Development	Public Comment Tracking	Administrative Management	200-000
401119	Administrative Management	Facilities, Fleet and Equipment Management	Administrative Management	200-000
401120	Administrative Management	Help Desk Services	Administrative Management	200-000
401121	Administrative Management	Security Management	Administrative Management	200-000
401122	Administrative Management	Travel	Administrative Management	200-000
401123	Administrative Management	Workplace Policy Development and Management	Administrative Management	200-000
304101	Planning and Budgeting	Budget Formulation	Financial Management	215-000
304105	Planning and Budgeting	Budget Execution	Financial Management	215-000
304259	Planning and Budgeting	Budget and Performance Integration	Financial Management	215-000
402124	Financial Management	Accounting	Financial Management	215-000
402125	Financial Management	Funds Control	Financial Management	215-000
402126	Financial Management	Payments	Financial Management	215-000
402127	Financial Management	Collections and Receivables	Financial Management	215-000
402128	Financial Management	Asset and Liability Management	Financial Management	215-000
402129	Financial Management	Reporting and Information	Financial Management	215-000
402261	Financial Management	Cost Accounting / Performance Measurement	Financial Management	215-000
119064	Workforce Management	Training and Employment	Human Resource Management	220-000
119066	Workforce Management	Worker Safety	Human Resource Management	220-000
304106	Planning and Budgeting	Workforce Planning	Human Resource Management	220-000
403228	Human Resource Management	Labor Relations	Human Resource Management	220-000
403250	Human Resource Management	HR Strategy	Human Resource Management	220-000
403251	Human Resource Management	Staff Acquisition	Human Resource Management	220-000
403252	Human Resource Management	Organization and Position Management	Human Resource Management	220-000
403253	Human Resource Management	Compensation Management	Human Resource Management	220-000
403254	Human Resource Management	Benefits Management	Human Resource Management	220-000
403255	Human Resource Management	Employee Performance Management	Human Resource Management	220-000
403257	Human Resource	Separation Management	Human Resource Management	220-000

Six Digit BRM Code	FEA BRM Line of Business	FEA BRM Sub-Function	Segment Name	Segment Code
	Management			
403258	Human Resource Management	Human Resources Development	Human Resource Management	220-000
405143	Supply Chain Management	Goods Acquisition	Supply Chain Management	240-000
405144	Supply Chain Management	Inventory Control	Supply Chain Management	240-000
405145	Supply Chain Management	Logistics Management	Supply Chain Management	240-000
405146	Supply Chain Management	Services Acquisition	Supply Chain Management	240-000
303097	Legislative Relations	Legislation Tracking	Support Services	245-000
303098	Legislative Relations	Legislation Testimony	Support Services	245-000
303100	Legislative Relations	Congressional Liaison Operations	Support Services	245-000
304102	Planning and Budgeting	Capital Planning	Support Services	245-000
304103	Planning and Budgeting	Enterprise Architecture	Support Services	245-000
304107	Planning and Budgeting	Management Improvement	Support Services	245-000
307118	Revenue Collection	Federal Asset Sales	Asset Management	250-000
305108	Public Affairs	Customer Service	Customer Relationship Management	320-000
305109	Public Affairs	Official Information Dissemination	Customer Relationship Management	320-000
305110	Public Affairs	Product Outreach	Customer Relationship Management	320-000
305111	Public Affairs	Public Relations	Customer Relationship Management	320-000
404141	Information and Technology Management	Record Retention	Information and Records Management	345-000
404142	Information and Technology Management	Information Management	Information and Records Management	345-000
404262	Information and Technology Management	Information Sharing	Information Sharing	350-000
404139	Information and Technology Management	IT Infrastructure Maintenance	IT Infrastructure	355-000
404140	Information and Technology Management	Information Security	IT Security	360-000
404263	Information and Technology Management	System and Network Monitoring	IT Security	360-000
404136	Information and Technology Management	System Development	IT Systems Management	365-000
404137	Information and Technology Management	Lifecycle/Change Management	IT Systems Management	365-000
404138	Information and Technology Management	System Maintenance	IT Systems Management	365-000

Appendix G: Terms and Definitions: Excerpts From OMB Circular No. A-11, Part 1, Chapter III, Exhibit 53

Budget Execution represents activities associated with the legal and managerial uses of budgetary resources to achieve results that comply with the enacted Budget and Administration policy. Budget execution activities include but are not limited to: apportionments, allotments, commitments, reprogramming actions, incurring obligations, and funds control. See sections 120 through 150 of Part 4 of OMB Circular No. A-11 for a comprehensive list of Budget execution activities.

Budget Formulation represents activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. This includes the collection and use of performance information to assess the effectiveness of programs and develop Budget priorities.

Business Reference Model (BRM) one of five reference models of the Federal Enterprise Architecture, is a function-driven framework used to describe the lines of business and sub-functions performed by the Federal Government independent of the agencies performing them. IT investments are mapped to the BRM to identify collaboration opportunities.

Capital Planning and Investment Control (CPIC) means the same as capital programming and is a decision-making process for ensuring IT investments integrate strategic planning, budgeting, procurement, and the management of IT in support of agency missions and business needs. The term comes from the Clinger-Cohen Act of 1996 and generally is used in relationship to IT management issues.

Cloud Computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model promotes availability and is composed of five essential characteristics (on-demand self service, broad network access, resource pooling, rapid elasticity, and measured service), three service models (software as a service, platform as a service, and infrastructure as a service), and four deployment models (private, community, public and hybrid). Please note that cloud computing is an evolving paradigm, and its definition will continue to evolve. See NIST definition of Cloud Computing

Core Financial System is an information system that may perform all financial functions including general ledger management, funds management, payment management, receivable management, and cost management. The core financial system is the system of record that maintains all transactions resulting from financial events. It may be integrated through a common database or interfaced electronically to meet defined data and processing requirements. The core financial system is specifically used for collecting, processing, maintaining, transmitting, and reporting data regarding financial events. Other uses include supporting financial planning, budgeting activities, and preparing financial statements. Any data transfers to the core financial system must be: traceable to the transaction source; posted to the core financial system in accordance with applicable guidance from the Federal Accounting Standards Advisory Board (FASAB); and in the data format of the core financial system.

Federal Enterprise Architecture (FEA) is a business-based framework for government-wide improvement. It describes the relationship between business functions and the technologies and information supporting them. The FEA is constructed through a collection of interrelated "Segment Architectures" and "reference models" designed to facilitate cross-agency analysis and the identification of duplicative investments, gaps, and opportunities for collaboration within and across federal agencies. For the next President's Budget, major IT investments should be aligned with each reference model within the FEA framework. More information about the FEA reference models is available at http://www.whitehouse.gov/omb/e-gov/fea.

Federal Segment Architecture Methodology (FSAM) – is a scalable and repeatable step-by-step process for developing and using segment architectures developed by distilling proven best practices from across Federal agencies. Use of the FSAM should result in more complete and consistent segment architecture products by helping architects engage segment leaders to deliver value-added plans for improved mission delivery. Specifically, FSAM includes guidance to help architects establish clear relationships among strategic goals, detailed business / information management requirements, and measurable performance improvements within the segment.

Financial Management consists of activities that support the interrelationships and interdependencies between budget, cost and management functions, and the information associated with business transactions.

Financial Management System includes the core financial systems and the financial portions of mixed systems necessary to support financial management, including automated and manual processes, procedures, and controls, data, hardware, software, and support personnel dedicated to the operation and maintenance of system functions. The following are examples of financial management systems: core financial systems, procurement systems, loan systems, grants systems, payroll systems, budget formulation systems, billing systems, and travel systems.

Financial Operations represent activities associated with processing, recording, and reporting of revenues, receipts, disbursements, expenditures, assets, liabilities, and other financial transactions; reconciliation of asset and liability accounts, such as accounts or loans receivable, with subsidiary records and with external data, such as Treasury cash records; and preparing financial statements.

Financial System (See financial management system, core financial system, and mixed financial system.)

Funding Source means the direct appropriation or other budgetary resources an agency receives. You need to identify the budget account and the budget authority provided. Report those budget accounts providing the financing for a particular investment.

Government Information means information created, collected, processed, disseminated, or disposed of by or for the Federal government.

Green IT refers to the application of sustainable and environmentally efficient practices so that computing resources are used in a sustainable and environmentally efficient manner. Green IT applies to a broad range of activities that span the entire IT capital asset lifecycle, including but not limited to (a) research and development; (b) manufacturing; (c) acquisition; (d) operations/use; and (e) disposition. Sustainable computing practices should be integrated into agency capital planning processes.

Information Resource Management (IRM) Strategic Plan is strategic in nature and addresses all information resources management of the agency. Agencies must develop and maintain the agency's IRM

strategic plan as required by 44 U.S.C. 3506(b)(2). IRM strategic plans should support the agency's strategic plan required in OMB Circular A–11, provide a description of how information resources management activities help accomplish agency missions, and ensure IRM decisions are integrated with organizational planning, budget, procurement, financial management, human resources management, and program decisions.

Information System means a discrete set of information technology, data, and related resources, such as personnel, hardware, software, and associated information technology services organized for the collection, processing, maintenance, use, sharing, dissemination or disposition of information.

Information Technology, as defined by the Clinger-Cohen Act of 1996, sections 5002, 5141, and 5142, means any equipment or interconnected system or subsystem of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For purposes of this definition, equipment is "used" by an agency whether the agency uses the equipment directly or it is used by a contractor under a contract with the agency that (1) requires the use of such equipment or (2) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product. Information technology includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. It does not include any equipment acquired by a Federal contractor incidental to a Federal contract.

Information Technology Migration Investment means the partner agency's migration costs associated with moving an existing investment, system, process or capability to a Government-wide common solution. All IT E-Gov and Line of Business (LoB) migration projects may be tracked separately and not part of a larger investment.

Infrastructure as a Service (IaaS) is the capability provided to the consumer to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and application. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, deployed applications, and possibly limited control of select networking components (e.g. host firewalls).

Major IT Investment means a system or an acquisition requiring special management attention because it: has significant importance to the mission or function of the agency, a component of the agency or another organization; is for financial management and obligates more than $500,000 annually; has significant program or policy implications; has high executive visibility; has high development, operating, or maintenance costs; is funded through other than direct appropriations; or is defined as major by the agency's capital planning and investment control process. OMB may work with the agency to declare other investments as major investments. If you are unsure about what investments to consider as "major", consult your agency budget officer or OMB representative. Investments not considered "major" are "nonmajor".

Managing Partner represents the agency designated as the lead agency responsible for coordinating the implementation of the E-Gov or LoB initiative. The managing partner is also responsible for coordinating and submitting the exhibit 300 for the initiative and the exhibit 300 will be represented as part of the managing partner's budget portfolio.

Mixed Financial System is an information system that can support both financial and non-financial functions.

New IT Project means an IT investment newly proposed by the agency that has not been previously funded by OMB. This does not include investments existing within the agency that have not previously been reported to OMB.

Non-Major IT Investment means any initiative or investment not meeting the definition of major defined above but is part of the agency's IT Portfolio. All non-major investments must be reported individually on the exhibit 53.

On-going IT Investment means an investment that has been through a complete Budget cycle with OMB and represents Budget decisions consistent with the President's Budget for the current year (BY–1).

Partner Agency represents the agency for an E-Gov or LoB initiative designated as an agency that should provide resources (e.g., funding, FTEs, in-kind) to the management, development, deployment, or maintenance of a common solution. The partner agency is also responsible for including the appropriate line items in its Exhibit 53 reflecting the amount of the contribution for each of the E-Gov or LoB initiatives to which it is providing resources.

Partner Agency IT "fee-for-service" represents the financial fees paid for by a partner agency for IT services provided.

Platform as a Service (PaaS) is the capability provided to the consumer to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly application hosting environment configurations.

Primary FEA Mapping is the identification of the primary function this IT investment supports. For the next President's Budget, investments should identify a primary mapping to the BRM (Line of Business and associated sub-function). Only one primary FEA mapping should be provided for each investment. A BRM mapping should be used if the investment primarily supports a functional area. Guidance on the BRM codes for the primary mappings can be found at http://www.egov.gov. Note: BRM lines of business and sub-functions in the Mode of Delivery business area are not valid as primary FEA mappings.

Privacy Impact Assessment (PIA) is a process for examining the risks and ramifications of using information technology to collect, maintain and disseminate information in identifiable form from or about members of the public, and for identifying and evaluating protections and alternative processes to mitigate the impact to privacy of collecting such information. Consistent with September 26th, 2003 OMB guidance (M–03–22) implementing the privacy provisions of the E-Government Act, agencies must conduct and make publicly available PIAs for all new or significantly altered information technology investments administering information in identifiable form collected from or about members of the public.

Records includes all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes, extra copies of documents preserved only for convenience of reference and stocks of publications and of processed documents are not included.

Segment Architecture is a detailed results-oriented architecture (baseline and target) and a transition strategy for a portion or segment of the enterprise. Segments are individual elements of the enterprise describing core mission areas, and common or shared business services and enterprise services and provides the core linkage of the IT Investment Portfolio to the Agency's Performance Management System. As such, segments are designed to be common across programs that support the same mission area. Increasingly, shared segments will be common across government and agencies should plan to use approved government-wide shared segments as their target architecture.

Software as a Service (SaaS) is the capability provided to the consumer to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin client interface such as a web browser (e.g., web-based email). The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

Validated E-Gov Standard means a private, voluntary or U.S. government-developed standard developed and adopted via a widely recognized and broadly accepted process. These standards have been validated for use by NIST. The E-Gov standard validation process and validated standards can be located at the NIST E-Gov Standards Resource Center.

Appendix H: Exhibit 53 B Template

	Agency IT Security Portfolio			
	President's Budget (FY 2012) Exhibit 53b - *Agency - (Circular A-11: Appendix - C)*			
		PY	CY	BY
Row 1	Number of Government FTEs with information security responsibilities			
Row 2	Average cost per Government FTE			
Row 3	Number of Contractor FTEs with information security responsibilities			
Row 4	Average cost per Contractor FTE			
Row 5	Total IT Security Tools Costs:	0	0	0
Row 6	Anti-virus software			
Row 7	Anti-malware software			
Row 8	Intrusion detection systems			
Row 9	Intrusion prevention systems			
Row 10	Web filtering software			
Row 11	Email filtering software			
Row 12	SIM/SIEM tools			
Row 13	Data leakage protection tools			
Row 14	Costs for C&A of systems			
Row 15	Number of systems scheduled for C&A			
Row 16	Annual FISMA testing costs			
Row 17	Network penetration testing activities costs			
Row 18	Security awareness training costs			
Row 19	Security training costs for employees with significant security responsibilities			

Appendix I: References

OMB Circular A-11, Section 53—Information Technology and E-Government, found at
http://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/s53.pdf

OMB Circular A-11, Section 300—Planning, Budgeting, Acquisition, and Management of
Capital Assets, found at
http://www.whitehouse.gov/omb/assets/a11_current_year/s300.pdf

The Clinger Cohen Act on Federal IT Management, found at
http://irm.cit.nih.gov/itmra/itmra96.html

Department of Energy eCPIC User Guide for OMB Exhibit 53 and Exhibit 300 Reporting, found
in the eCPIC Global Resource Library

FEA Guidance, found at http://www.whitehouse.gov/omb/e-gov/fea/

Federal Chief Information Officers Council at http://www.cio.gov/

White House Website – www.whitehouse.gov