1) PREFACE

This Guidance establishes the Department of Energy's (DOE) commitment to foster, maintain, and enhance the development and integration of a Department of Energy Enterprise Architecture (EA). This Guidance ensures a consistent, coordinated approach to the implementation of an Enterprise Architecture in order to improve the business value of information technology; ensure compliance with federal legislation, directives and guidance; and provide integrated business intelligence for use in management decision-making processes resulting in more efficient and effective use of Departmental resources.

The EA maintains and enhances the Department's strategy, performance, business, services, data, information technology, and security environments for analysis at the Department. It addresses the entire DOE enterprise; encompassing all DOE offices, sites, business functions, and supporting services and technologies that perform and enable DOE activities.

2) GUIDANCE

The DOE will develop an Enterprise Architecture to improve the management planning and decision-making process by integrating EA with key DOE management processes[1], ensuring compliance[2] and enforcement through a governance process that is measured and managed. This includes developing a target direction and transition strategy for the agency that meets our mission goals and strategic priorities. The DOE will take a federated approach, by incorporating into an integrated model both a Department–wide architecture as well as architectures specific to individual Departmental Elements[3]. The Program and Staff Offices will support this federated approach by working collaboratively with the Office of the Chief Information Officer to continue to raise the maturity of the DOE EA process and tools that support the Department. This shall be performed through coordinated processes, integrated project teams, and shared system data; resulting in a business-driven EA that drives the Capital Planning process and improves executive decision making.

The provisions of this guidance apply to all Departmental Elements. Additionally, cyber security continues to be a priority for the Department. As such, the DOE EA is developed, managed, and maintained with an understanding of the need to support the cyber security-related dimensions of the mission and goals of the Department.

Specific Departmental Elements may have national security or other considerations for which it alone must plan, based on superseding regulatory guidance. In those instances, the individual Element may be required to implement its part of the EA using specialized channels and customized filtering methods.

3) RESPONSIBILITIES

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[1] Key DOE management processes and functions include Strategic Planning, Budget Formulation, Capital Planning, Cyber/Information Security, and Program/Project Management.

[2] The DOE EA is compliant and consistent with the Clinger-Cohen Act of 1996, OMB Circular A-130, and the Federal Enterprise Architecture (FEA).

[3] The provisions of this Memorandum apply to all Departmental Elements. These directional and reporting controls would be applicable to all component organizations, including the National Nuclear Security Administration (NNSA). The Administrator of the NNSA is responsible for ensuring that the NNSA implements these guidelines, and should direct the NNSA's Chief Information Officer (CIO) to fully support the DOE CIO's efforts to successfully implement the Department-wide Enterprise Architecture, to strengthen its effectiveness, and to ensure that it complies with the Clinger-Cohen Act of 1996, Office of Management and Budget (OMB) Circular A-130, and the Federal Enterprise Architecture (FEA).

The EA is driven by DOE's Strategic Plan and Information Resources Management Strategic Plan, and fully supports and aligns with the Department's mission, vision, goals, and objectives. The DOE EA guidance, manuals, and orders will be developed consistent with the Guidance and relate directly to the development, approval, and management of EA products and procedures. The federated framework is based on defined EA principles and includes governance, specifications, and standards for communications and coordination across the Department.

The DOE EA is to be used to support mission needs and is to provide business value through a collaborative working relationship among all Departmental Elements. To further enable enforcement and compliance, the DOE is committed to a communication and coordination process that works collaboratively with key stakeholders to ensure compliance with applicable laws, guidance, and policy.

To enable this objective, a DOE architecture-based governance process focused on compliance and improving Departmental decision-making has been developed, supporting high maturity levels of EA practice and core business functions. The governing bodies supporting this process include the DOE Management Council, Information Technology Council (ITC), Architecture Review Board (ARB) and the Enterprise Architecture Working Group (EAWG) with further responsibilities outlined below.

Responsibilities of the DOE Office of the Chief Information Officer (DOE OCIO):

- Maintain the overall health of the DOE EA and its governance practices; working collaboratively with the key stakeholders and ensuring compliance with applicable laws, guidance, and policy.

- Define and document the DOE EA through a federated framework for developing, aligning, and implementing information technology acquisition, development, and maintenance activities with the Department's mission and strategic goals.

- Provide functional oversight of the DOE EA; directly supporting the institution of a governance process, the development of technology standards and processes, and the integration of EA, capital planning and investment control, security, budget, strategic portfolio review, and other management processes.

- Facilitate the strategic direction and planning efforts of other executive offices and program managers by directing EA priorities accordingly to present DOE EA reports, analyses and recommendations in accordance with legislation, regulations, directives, and other mandates.

- Ensure the execution of federated EA activities are in accordance with both the Department's mission strategies and priorities and the OCIO's strategies and priorities.

- Obtain buy-in and concurrence from the Management Council on corporate-wide decisions.

Responsibilities of the DOE Program and Staff Offices:

- Work collaboratively within the DOE EA framework and coordinate efforts to ensure the integration of a Department–wide architecture as well as architectures specific to individual Departmental Elements.

- Develop and maintain an Enterprise Architecture for their organization including architecting and understanding the business needs of their organization.

- Provide information content to the OCIO and Departmental Elements to ensure effective integration and alignment of the DOE EA and the mission strategy, performance, business, data, applications, services, technology, and security environments of the Departmental Elements.

- Provide a representation to the ARB and EAWG.

- Represent and work with their contractors to address EA direction, issues and information needs.

Responsibilities of the DOE Management Council:

- Enterprise Architecture issues of Departmental significance will be submitted for consideration, approval and implementation to the DOE Management Council, which is made up of senior management at the Department of Energy.

Responsibilities of the DOE Information Technology Council (ITC) related to Enterprise Architecture:

- Promote collaboration and the effective and efficient acquisition and use of information resources, work to reduce the cost of operations, improve the management and execution of the Department's IT investments in support of achieving DOE missions.

- Facilitate the development, maintenance, and implementation of a sound and integrated Department-wide enterprise architecture in accordance with the Clinger-Cohen Act of 1996 and OMB guidance.

Responsibilities of the DOE Architecture Review Board (DOE ARB):

- Provide recommendations to the OCIO on enterprise architecture strategies, issues, approaches, and products.

- Facilitate communication with Departmental Elements related to their Enterprise Architectures.

- Review and approve, for submission to the ITC, architecture-based recommendations, guidance and standards proposed by the DOE Chief Architect.

- Review and approve products of DOE EA working groups.

Responsibilities of the DOE Chief Enterprise Architect:

- Acts as the functional program manager of DOE EA processes, including responsibility for maturing the DOE EA; providing leadership and direction to groups supporting the EA effort.

- Coordinate the development, management, and maintenance of the Department-wide EA.

- Establish and maintain relationships with the Departmental Elements, DOE OCIO, and other Federal organizations to the mutual benefit of the entire DOE enterprise.

- Submit appropriate Departmental architecture-based work products to the ARB and ITC for review and approval.

- Provide subsequent guidance in conjunction with the ARB.

Responsibilities of the DOE Business Owners (SMEs):

- Defines change drivers and business and information management requirements for the segment.

- Identify goals and objectives and performance measures.