

Management System: Project Management			
Subject Area: Critical Decision and Change Control Management			
Procedure: Critical Decision 0, Approve Mission Need			
<table border="1"> <tr> <td style="width: 33%;">Issue Date and Revision Number: 2/26/15, Rev. 3 (GENERAL REVISION)</td> <td style="width: 33%;">Lead Subject Matter Expert: John Wood</td> <td style="width: 33%;">Management System Owner: Terry Brennan</td> </tr> </table>	Issue Date and Revision Number: 2/26/15, Rev. 3 (GENERAL REVISION)	Lead Subject Matter Expert: John Wood	Management System Owner: Terry Brennan
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1.0 Applicability

This procedure applies to all U.S. Department of Energy (DOE), Office of Environmental Management (EM), Consolidated Business Center (EMCBC) and EM “Small Sites” staff who must document a mission requirement for a capital asset project with a Total Project Cost (TPC) greater than \$10 million. Requirements for Acquisition Executive (AE) approval of Critical Decision 0 (CD-0, Approve Mission Need) are defined in DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets. As a Program Secretarial Officer (PSO), the Assistant Secretary for Environmental Management (EM-1) will approve all formal Mission Need Statements for EM capital asset projects; the Mission Need Statement is a precursor to AE approval of CD-0 and is explained in further detail below.

The Director of the EMCBC is the line manager for all Small Sites, and also serves as the AE for Small Site capital asset projects that have a TPC under \$100 million. Federal Project Directors (FPD) and project management support staff for such capital asset projects should review this procedure prior to pursuing AE approval of CD-0. A separate EMCBC procedure, for the local acquisition advisory board (i.e., the CBCAAB) describes the administrative process for obtaining EMCBC Director approval of all Critical Decisions except CD-0 (where approval authority cannot be delegated lower than the PSO). However, the CBCAAB can provide review and oversight for the development of draft CD-0 deliverables for proposed projects at any Small Site, as a precursor to submission of such materials to the acquisition advisory board at EM Headquarters (the EMAAB). A second EMCBC procedure, for managing the Project Initiation Phase, complements this procedure for CD-0.

This procedure is consistent with the EM Enterprise Requirements System (EMERS) Functional Area Description for Project Management, the associated Subject Area for Critical Decision Management and subsidiary procedures for obtaining CD-0 and for submitting documents to the EMAAB and/or ESAAB for review.

2.0 Required Procedure

A Mission Need Statement (MNS) documents a mission requirement the DOE cannot meet through non-material means. It is the primary document supporting approval of CD-0. Mission needs are identified in terms of capability, not in terms of equipment, facility, or other solutions, and must support the DOE Strategic Plan and EM Strategic Plan. Approval of the mission need is the authorization to develop alternative concepts and functional requirements.

A formal MNS must be developed for projects having an expected TPC greater than \$20 million. Projects with a TPC between \$10 million and \$20 million still require a statement of need and a cost and schedule range. Additional information regarding development of a MNS is available in DOE G 413.3-17 (Mission Need Statement) and in the Office of Management and Budget (OMB) Capital Programming Guide. As PSO, the EM-1 will approve all formal MNS. Depending upon the TPC of the proposed new project, the CD-0 will be approved by the Site or Field Office Manager (e.g., the EMCBC Director), EM-1, the responsible Under Secretary or the Deputy Secretary. Projects with a TPC above \$100 million are subject to additional reviews by parties outside of EM.

The OMB Capital Programming Guide asks federal agencies to answer the following Three Critical Questions before planning to acquire capital assets:

1. Does the investment in a major capital asset support core/priority mission functions that need to be performed by the Federal Government?
2. Does the investment need to be undertaken by the requesting agency because no alternative private sector or governmental source can better support the function?
3. Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology?

Until CD-2 (Approve Performance Baseline), when the performance baseline (PB) for the project has been approved, the cost and schedule estimates for a newly approved project will be in ranges, roughly equating to Association for Advancement of Cost Engineering International (AACEI) Class 5 or 4 estimates. See DOE G 413.3-21 (Cost Estimating Guide) for more information. The term “TPC,” as used in this procedure, equate to the “high end of the estimated cost range.”

General steps related to obtaining CD-0 are listed in DOE O 413.3B, Appendix A, Section 4.a, Table 2.0. The below table provides additional detail to accomplish all required steps.

Step 1	<p>Choose a Project Lead.</p> <p>Until the Federal Project Director (FPD) is appointed, a Program Official nominally serves as the FPD. If the Project is initiated from EM Headquarters, then the Deputy Assistant Secretary (DAS) of the sponsoring Mission Unit will serve in this role. The EMCBC Director will be the nominal FPD for field-initiated projects, but will still have an EM Mission Unit contact.</p> <p>The Project Lead is responsible for assembling the required CD-0 documentation; he/she must work closely with the Mission Unit contact to set and meet expectations.</p>
Step 2	<p>The Project Lead performs and records pre-conceptual planning activities.</p> <p>For further information, see DOE O 413.3B, Appendix C, Topical Area # 4 (Design Maturity) and DOE G 413.3-1 (Managing Design and Construction using Systems Engineering for Use with DOE O 413.3A), Section 3.0. These pre-conceptual planning activities focus on the Program's strategic goals and objectives, and lead to the MNS.</p> <p>A key outcome of pre-conceptual planning is to establish the cost range of the proposed project. At CD-0, the cost estimate will be an Order of Magnitude or AACEI Classes 5 estimate. The upper cost range will determine the total project cost (TPC) and the associated Acquisition Executive (AE) authority level.</p>
Step 3	<p>Prepare the Mission Need Statement.</p> <p>DOE G 413.3-17 describes the expected contents of a Mission Need Statement (MNS) and provides explanatory information. The statement of need for a Project with a TPC under \$20 million should follow DOE G 413.3-17 in a tailored fashion; a statement of need must be identified and linked to EM's mission, and must include an estimated cost and schedule range.</p>
Step 4	<p>Obtain Approval of the Mission Need Statement.</p> <ul style="list-style-type: none"> • For Projects with a TPC under \$20 million, submit the statement of need to the EMCBC Director for approval. • For Projects with a TPC under \$100 million, go to Step 4.1. • For Projects with a TPC equal to or greater than \$100 million, review Step 4.1 and proceed to Step 4.2.
Step 4.1	<p>For Projects with a TPC under \$100 million:</p> <p>As early as possible, send the draft MNS to the EM Office of Project</p>

	<p>Assessment (EM-53) representative for the subject site. As defined in the aforementioned EMERS procedures for CD-0 and for processing approvals for the EMAAB and ESAAB, the EM-53 representative will initiate any necessary dialogue with the DOE Office of Acquisition and Project Management (APM).</p> <p>Allow six weeks for initial review, comment resolution, and final submission of the MNS.</p> <p>While approval of the MNS does not represent approval of CD-0, EM-53 (the EMAAB Secretariat) often schedules an EMAAB meeting to review and approve the MNS and CD-0 together. If so, proceed to Step 6.</p> <p>NOTE: When the MNS is submitted, identify the Program Manager or other DOE Headquarters point of contact for the MNS.</p> <ol style="list-style-type: none"> a. Obtain the EMCBC Director’s endorsement on the MNS. b. Submit the MNS document to EM-53 for review (hard and electronic copy). c. Resolve any comments received. d. Submit a revised hard copy of the MNS to EM-53 for concurrence by the Deputy Assistant Secretary (DAS) of the EM Office of Acquisition and Project Management (EM-50). The MNS will then continue through the concurrence/approval chain. The final submission should be approximately three weeks prior to the anticipated review and approval by EM-1. e. Obtain the following concurrence signatures for the MNS: <ul style="list-style-type: none"> • Program Manager • Program Associate Director • DAS for Acquisition and Project Management (EM-50) • Director, EM Office of Budget • EM-1 (final approval authority)
<p>Step 4.2</p>	<p>For Projects with a TPC equal to or greater than \$100 million:</p> <p>The DOE Office of Acquisition and Project Management (APM, [MA-60]) will review the MNS and provide a recommendation to EM-1. Allow six weeks for the APM review.</p> <p>If the Project is a Major System Project (i.e., has a TPC equal to or greater than \$750 million, or has been so designated), then EM-53 will perform a Mission Validation Independent Review and APM/MA-60 will perform an Independent</p>

	<p>Cost Review (ICR). Finally, if the TPC is equal to or greater than \$400 million, the responsible Under Secretary (US) or the Secretarial Acquisition Executive (SAE) will approve the CD-0, separate from EM-1’s approval of the MNS. Allow three months for the APM review of the MNS for a Major System Project.</p> <p>See DOE O 413.3B, Appendix A, Section 4.a, Table 2.0, and DOE G 413.3-9 (Project Review Guide for Capital Asset Projects) for project review requirements at CD-0.</p> <ol style="list-style-type: none"> a. Follow Step 4.1 above to submit the draft MNS document for informal review by EM-53. b. If the TPC is between \$100 and \$750 million, then prepare a request from the EMCBC Director (or Mission Unit DAS) through EM-53 to APM/MA-60 to review the MNS. If the TPC is over \$750 million, prepare a request to APM/MA-60 to perform an ICR on the Project. EM-53 will schedule a mission validation independent review as part of preparing for MNS approval. c. Resolve any comments received from EM-53 and schedule an EMAAB meeting (if needed) to review the MNS. <p>NOTE: Approval of the MNS does not represent approval of CD-0.</p>
<p>Step 5</p>	<p>Determine the Critical Decision Approving Official.</p> <p>The upper end of the cost range will determine the Approving Official for CD-0.</p> <ul style="list-style-type: none"> • For Projects with a TPC under \$400 million, the approving official is EM-1. • For Projects with a TPC equal to or greater than \$400 million, the approving official is the Under Secretary for Management and Performance, or the Deputy Secretary. <p>NOTE: Approval of the MNS, and the EMAAB (or ESAAB) review and associated AE or SAE approval of CD-0, are independent activities. Steps below refer to obtaining approval of CD-0 after the MNS has been approved.</p>
<p>After EM-1 approval of Mission Need Statement</p>	
<p>Step 6</p>	<p>The EM Mission Unit requests that EM-53 schedule an EMAAB meeting. Allow at least three weeks for EM Headquarters review, comment and response before the scheduled EMAAB meeting.</p> <p>The EMAAB or ESAAB process, as appropriate, will be followed. There will be a conceptual briefing and at least one preparatory meeting before the final</p>

	<p>formal EMAAB meeting. The outcome will be either approval for Projects within EM-1's AE authority, or endorsement for larger Projects. Refer to EMERS Procedure 6 (Processing Approvals for EMAAB and ESAAB) for further details. Also see APM Standard Operating Procedure (SOP) for ESAAB, dated July 2014.</p>
<p>Step 7</p>	<p>Submit the CD-0 briefing package through the Mission Unit to EM-53.</p> <p>The package should contain a checklist of how all CD-0 prerequisites were met, a copy of the approved MNS, a PowerPoint presentation built around the MNS, and a draft CD-0 approval memorandum. Provide EM-53 with copies of all CD prerequisites for reference purposes.</p> <p>The PowerPoint presentation should identify, at a minimum, enabling or bounding assumptions for the project, the range of estimated costs and time spans, the project objective and its necessity, and a map to locate the area(s) of interest.</p> <p>NOTE: The EMCBC maintains a Critical Decision Requirements Checklist (MS Word template) that can be used to document a project's readiness for CD-0 (or any other Critical Decision). The checklist can also be used for a Tailoring Strategy, which serves as a forward-looking tool of planned DOE O 413.3B deliverables.</p>
<p>Step 8</p>	<p>Conduct the Pre-EMAAB meeting, per below:</p> <ul style="list-style-type: none"> a. The EMAAB Director (EM-50) chairs the Pre-EMAAB meeting. The Project Lead and the Mission Unit contact will make the presentation. b. One of the pre-meeting objectives is to decide who (the Project Lead, Mission Unit contact, EMCBC Director, other) will present at the formal EMAAB meeting. c. Feedback is obtained from all EM DASs, the Associate Principal DAS (EM-2.1), Principal DAS (EM-2), APM (MA-60), the DOE Offices of Chief Counsel (GC) and Chief Financial Officer (CFO), and other attendees. Suggested edits and action items are recorded for tracking through closure. d. EM-53 prepares and distributes minutes of the pre-EMAAB meeting. e. The Project Lead and Mission Unit contact address actions items, as appropriate, in consultation with pertinent program staff. The Project Lead revises the CD-0 package, as necessary, and resubmits the package to EM-53 through the Mission Unit.
<p>Step 9</p>	<p>Conduct the formal EMAAB meeting with EM-1, per below:</p> <ul style="list-style-type: none"> a. The EMAAB Secretariat in EM-53 distributes the updated CD-0 briefing package for the EMAAB meeting as read-ahead material for all meeting invitees. The EMAAB meeting invitees include EM-1, EM-2, EM-2.1, all EM DASs, and designated representatives from APM, GC, CFO and

	<p>other attendees.</p> <ul style="list-style-type: none"> b. EM-1 chairs the EMAAB meeting. The person identified previously, for presentation at the Pre-EMAAB meeting, also presents at the formal EMAAB meeting. c. The EMAAB members will ask questions, raise concerns, and make a recommendation for approval to EM-1 (or the higher level AE, as appropriate).
<p>Step 10</p>	<p>The Project Lead and Mission Unit Contact address comments and resubmit the CD-0 package to obtain EM-1’s approval (or endorsement, if appropriate) of CD-0.</p> <ul style="list-style-type: none"> a. The Project Lead and Mission Unit contact address new actions items, as appropriate. The Project Lead revises the CD-0 package as necessary and resubmits the package to EM-53 through the Mission Unit. b. The EM-53 point of contact performs an acceptance review of the revised CD-0 briefing package and verifies satisfactory closure of key action items. c. The Mission Unit contact prepares the CD-0 approval memorandum and obtains appropriate concurrences. The CD package, complete with the finalized CD briefing package and draft approval memorandum, is forwarded to EM-1 for signature. d. Based on recommendations from the EMAAB, EM-1 will approve (or endorse) the CD-0 request, or defer approval until questions and/or issues are resolved. <p>An EM-1 (i.e., PSO level) CD-0 approval process ends here. The Project Lead collects final project documents and performs post-CD-0 actions per Step 16 below.</p>
<p>Step 11</p>	<p>For Projects with a TPC between \$400 and \$750 million:</p> <p>CD-0 must be approved by the Under Secretary for Management and Performance. The Mission Unit will ensure the briefing package includes a draft CD-0 approval memorandum that incorporates feedback obtained from EM-1 at the EMAAB Meeting.</p> <p>The EM-1 front office schedules an appointment for EM-1 and the Under Secretary to discuss the CD-0 package. The Under Secretary will render a decision and sign the approval memorandum, or will request further information prior to rendering a decision.</p>
<p>Step 12</p>	<p>For Projects with a TPC greater than \$750 million (i.e., a Major System Project):</p>

	<p>CD-0 must be approved by the Deputy Secretary of DOE. The ESAAB must first review the CD-0 package. Refer to aforementioned EMERS procedure for processing approvals for EMAAB and ESAAB, and to APM procedure for ESSAB. Perform the following steps for conduct of a Pre-ESAAB meeting:</p> <ol style="list-style-type: none"> a. Upon receipt of the EM-53 recommendation memorandum, the Mission Unit requests that EM-53 schedule a Pre-ESAAB meeting (or ESAAB Readiness Review) with the DOE Office of Project Management (MA-63). The Pre-ESAAB serves as a dry run of the formal ESAAB meeting with the Deputy Secretary. The purpose of the Pre-ESAAB meeting is to resolve comments and issues prior to the formal ESAAB meeting. b. The Mission Unit Manager submits a draft presentation to EM-53 one week before the Pre-ESAAB meeting, for review by all Pre-ESAAB members. The Pre-ESAAB briefing is usually presented by the Program Associate Director or by the Program Manager.
<p>Step 13</p>	<p>The Program Offices briefs Senior Management.</p> <p>In parallel with scheduling a Pre-ESAAB meeting, the Program Office schedules a meeting with the Under Secretary and/or EM-1/EM-2 and EM-53.</p> <p>NOTE: The purpose of this meeting is to brief senior management on the project’s request for CD-0 and to determine the manager (Under Secretary, EM-1, EM DAS, other) who will make the presentation at the formal ESAAB meeting. The Program Office usually tries to schedule this briefing several days prior to the Pre-ESAAB meeting, as a courtesy to senior management and to receive senior management’s perspective/comments on the draft presentation.</p>
<p>Step 14</p>	<p>Obtain ESAAB review and endorsement of CD-0.</p> <p>After briefing senior management and completing the Pre-ESAAB meeting:</p> <ol style="list-style-type: none"> a. The Program Office works with the Pre-ESAAB board members to resolve issues and answer inquiries prior to the formal ESAAB meeting. b. When inquiries and issues are resolved to the extent possible and the briefing package is finalized, the Program Associate Director forwards the finalized presentation to the ESAAB Secretariat and requests the ESAAB meeting for CD-0 be scheduled. Distribution includes the following individuals: <ul style="list-style-type: none"> • DAS, Office of Project Assessment (EM-53) • Program Manager • All others deemed appropriate by the Program Office

	<p>c. MA-63 confirms the Program’s readiness to proceed with the formal ESAAB meeting.</p> <p>d. The ESAAB Secretariat in MA-60 contacts the Program Office regarding the SAE’s next available meeting date, which is normally within two to three weeks of the request.</p> <p>e. Prior to the ESAAB meeting, the Program Office will:</p> <ul style="list-style-type: none"> • Determine who will make the CD-0 presentation at the ESAAB meeting. • Determine the individuals who will participate in the ESAAB meeting (usually limited to five seats). • Advise EM-53 of the date of the ESAAB meeting. • Provide APM with the required number of hard copies of the final presentation at least one hour prior to the ESAAB meeting. • Provide a laptop computer and overhead projector for real time, interactive presentation of the electronic CD-0 package during the ESAAB meeting. <p>f. After the ESAAB meeting, the Program Office makes any necessary changes to the draft CD-0 approval memorandum, per recommendations of APM.</p>
Step 15	<p>The Deputy Secretary of Energy (the SAE) approves CD-0.</p> <p>NOTE: Typically, the Program Office will receive the signed CD-0 approval memorandum from the SAE within two weeks of the ESSAB meeting.</p>
After AE (or SAE) approval of CD-0	
Step 16	<p>The FPD, Program Manager and APM begin reporting project status on a monthly basis in the DOE Project Assessment and Reporting System (PARS II) database. Refer to EMCBC procedure, APM Reporting, for further information.</p>
Step 17	<p>The AE begins conducting Quarterly Project Reviews (QPR), as required by DOE O 413.3B, Appendix B (Responsibilities), Section 6 (Acquisition Executive). Refer to EMCBC procedure, EM Reporting, for further information.</p>

3.0 References – Forms/Attachments/Exhibits

3.1 References

- DOE O 413.3B (Program and Project Management for the Acquisition of Capital Assets)
- EMCBC Procedure SAP-OCE&PMS-413.3B-A-05 (CBC Acquisition Advisory Board)
- EMCBC Procedure SAP-OCE&PMS-413.3B-B-01 (Managing the Project Initiation Phase)
- EM Enterprise Requirements System (EMERS), Functional Area Description for Project Management, Subject Area for Critical Decision Management, Procedure 1 (Obtaining CD-0, Approve Mission Need) and Procedure 6 (Processing Approvals for EMAAB and ESAAB)
- DOE G 413.3-17 (Mission Need Statement Guide)
- Office of Management and Budget (OMB) Capital Programming Guide (Supplement to OMB Circular A-11)
- DOE G 413.3-1 (Managing Design and Construction using Systems Engineering for Use with DOE O 413.3A)
- DOE G 413.3-9 (Project Review Guide for Capital Asset Projects)
- DOE Office of Acquisition and Project Management (APM) Standard Operating Procedure (SOP) for Energy Systems Acquisition Advisory Board (ESAAB), dated July 2014
- EMCBC Procedure SAP-OCE&PMS-413.3B-C-01 (Office of Acquisition and Project Management [APM] Reporting)
- EMCBC Procedure SAP-OCE&PMS-413.3B-C-02 (Office of Environmental Management [EM] Reporting)

4.0 Records Generated

Records generated through implementation of this procedure are identified as follows and are maintained by the Office of Cost Estimating and Project Management Support (OCE&PMS) in accordance with the EMCBC Organizational File Plan:

Records Category Code	Records Title	Responsible Organization	Quality Assurance (QA) Classification (Lifetime, Non-Permanent or Not Applicable)
ADM 16-01.4-A	ADMINISTRATIVE MANAGEMENT RECORDS, Baseline Management files Examples: Minutes from CBCAAB, EMAAB or ESAAB meetings	Office of Cost Estimating and Project Management Support	Not Applicable
ADM 16-05	ADMINISTRATIVE MANAGEMENT RECORDS, Project Control files Examples: Cost Estimate (order of magnitude) Mission Need Statement (MNS) Statement of Need (for TPC < \$20M) Mission Validation Independent Review Independent Cost Review (ICR) CD-0 Briefing Package CD-0 Approval Memo PARS II Monthly Report (electronic copy) Quarterly Project Review (QPR) package	Office of Cost Estimating and Project Management Support	Not Applicable

5.0 EMCBC Record of Revision

EMCBC RECORD OF REVISION

DOCUMENT TITLE: Subject Area Procedure: Critical Decision 0, Approve Mission Need

If there are changes to the controlled document, the revision number increases by one. Indicate changes by one of the following:

- I Placing a vertical black line in the margin adjacent to sentence or paragraph that was revised.
- I Placing the words GENERAL REVISION at the beginning of the text.

Rev. No.	Description of Changes	Revision on Pages	Date
Rev. 0	Initial issue		12/16/11
Rev. 1	GENERAL REVISION		8/1/12
Rev. 2	GENERAL REVISION		5/1/13
Rev. 3	GENERAL REVISION (to meet CBC MS format requirements)		2/26/15