

OHEP Guidance to Ensure Compliance with DOE O413.3A

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DOE line item construction projects and Major Items of Equipment with a Total Project Cost (TPC) of \$5 million or more are governed by DOE Order 413.3A on project management. This note is intended to help clarify the rules when applied to projects sponsored by the Office of High Energy Physics (OHEP). In addition, OHEP has established new budget and reporting (B&R) codes to make tracking of project costs more transparent, and this note describes how to use the new B&R codes. This guidance supersedes the previous guidance (“Cost reporting for potential future HEP projects,” Aug. 2006).

Labor Costs

One of the goals of effective project management is to identify all costs associated with the construction of the project. The purpose of capturing the costs of all labor used by the project is to ensure that project management has an understanding of the resources needed to complete the project.

Guidelines

1. Scientists

Support of the members (Ph.D. holding scientists) of the experimental collaboration who are participating in building a detector should generally not be charged to the project.

It has been the practice in the high energy physics program, particularly for detector fabrication projects, to utilize members of the scientific research collaboration to carry out some of the tasks in the fabrication project. This is done to exploit their expertise in the relevant detector technology and their knowledge of the ultimate use of the detectors.

In general, these scientists are supported by a variety of different funding sources including DOE funds, NSF funds, and university funds. It is not possible to capture the labor costs that are not funded by DOE. In order to select scientists for project-related tasks based on their skills and expertise that they bring to the project, rather than their cost to the project, it is desirable to **not** capture the costs of any scientists who are members of the associated scientific collaboration in the project costs. The only exception to this rule is when a physicist is working at a management-level (e.g., WBS Level 1 or Level 2) on a particular project, in which case his or her time **may** be charged as part of project management costs. Any such arrangement is subject to approval by the Federal Project Director and the Program Manager within the DOE Office of High Energy Physics.

The goals of project management can still be met, under the assumption that scientist labor costs are not in the TPC, by careful and explicit risk analysis of how the work assumed to be done by scientists not paid with project funds will be carried out if any of these scientists leave the project or otherwise cannot deliver on their commitments. Each project should reconcile its performance measurement strategy with its budgeting of scientist labor resources.

The preceding arguments generally **do not apply to accelerator physicists**, since the vast majority of accelerator physicists involved in DOE projects are employed by DOE laboratories, and they are supported with DOE funds. In particular cases, there may be gray areas, such as scientists working on accelerator-detector interfaces. In those cases the Federal Project Director should consider the arguments above in making a judgment on whether an individual scientist's labor should be costed on- or off-project.

2. Engineers, technicians, and computer professionals

Support of engineers, technicians, and computer professionals at universities and national laboratories who are essential for the design, fabrication and commissioning of the project should be properly costed to the project.

Engineers, technicians, and computer professionals at universities and national laboratories working on a DOE-funded project should *always* be paid by the project, **with project funds and included in the TPC**. If such a person is already supported by DOE funds not under the control of the project manager, then the project manager should contact OHEP to make arrangements to see that their labor costs are properly understood and included in the TPC. An individual's labor costs may be paid partly by the project and partly by other funding if this arrangement is agreeable to both the Federal Project Director and the person's employer. Contributions from other funding agencies or in-kind contributions from collaborators using other sources of funding should be outside the formal DOE project scope.

3. Graduate and Undergraduate Students

Graduate and undergraduate students are not costed as part of the project except when they contribute through paid labor on the project and in this case it is as a procurement for services performed.

Graduate students can receive an educational benefit from participating in some tasks in a project. Their participation should be limited to what is needed for their educational benefit and should not be used as substitute for paid labor. Graduate student salaries are therefore not included in the TPC. From time to time, undergraduate students are employed as paid term labor on projects, and included in the TPC. This is acceptable, subject to agreement of the Federal Project Director.

Other (Non-labor) Costs

Guideline

In general, any other non-labor project costs (e.g., procurements, computing support, materials and supplies) should be reported in the appropriate project categories. This includes all capital and operating costs (i.e., TPC) incurred after CD-0 (approve mission need) and until CD-4 (approve start of operations). Examples of Project B&R categories are given below. Occasionally there are in-kind contributions from collaborators which support or augment a project but are outside the formal project scope. These should be noted in project cost reporting but not charged to the project (e.g., Tier 2 computing support in the LHC Research Program)

B&R Codes for Projects

Generic detector R&D and preconceptual R&D targeted towards detector projects had previously been funded under KA150302 until it had matured enough to become a project. Analogous accelerator R&D activities were funded under KA150201. One problem with this structure was that there was no clear delineation between “generic” and “targeted” R&D. Projects themselves were often funded in a variety of B&R codes, making tracking and project budget management difficult. OHEP has instituted a new set of B&R codes to address these issues. Separate B&R codes are now used for “generic” R&D, targeted funding for preconceptual R&D on projects, and for all project activities that occur after a CD-0 is approved. These B&R codes are shown below.

KA110303	Current proton accelerator-based facility projects: Includes all project TPC funding (both Operating and Equipment) for approved Major Items of Equipment related to the Fermilab accelerator facility. <i>Includes all project funding from CD-0 to CD-4.</i> Also includes Other Project Costs for Line Item Construction associated with the accelerator facility at Fermi National Accelerator Laboratory.
KA110304	Future proton accelerator-based facility R&D: Includes pre-conceptual design and R&D for proposed future accelerator and detector projects that would make use of the accelerator facility at Fermi National Accelerator Laboratory. <i>For pre-CD-0 R&D only.</i>
KA120303	Current electron accelerator facility projects: Includes all project TPC funding (both Operating and Equipment) for approved Major Items of Equipment related to the accelerator facility at SLAC National Accelerator Laboratory. <i>Includes all project funding from CD-0 to CD-4.</i>
KA120304	Future electron accelerator-based facility R&D: Includes pre-conceptual design and R&D for proposed future accelerator and

	detector projects that would make use of the accelerator facility at SLAC National Accelerator Laboratory. <i>For pre-CD-0 R&D only.</i>
KA130303-1	Current non-accelerator-based projects: Includes all project TPC funding (both Operating and Equipment) for approved Major Items of Equipment related to non-accelerator-based experiments or facilities. <i>Includes all project funding from CD-0 to CD-4.</i>
KA130303-2	Future project R&D: Includes pre-conceptual design and R&D for proposed future experimental projects that are non-accelerator-based. <i>For pre-CD-0 R&D only.</i>

Accelerator projects that are targeted for a currently existing facility will have their preconceptual R&D funded in KA110304 or KA120304. Preconceptual R&D for the ILC or for LHC upgrades will continue to be funded under their dedicated B&R codes, KA150202-1 and KA110205-3 respectively. Generic detector and accelerator R&D activities (i.e. those with more than one potential scientific application) will continue to be funded under their dedicated B&R codes, KA150302 and KA150201-1 respectively.

Once a CD-0 has been approved for an MIE project, all costs including the capital equipment portion (TEC) and the other project costs (OPC) will be funded in one of the current project B&R codes,

- KA110303 Current proton accelerator-based projects,
- KA110205-6 LHC upgrade projects,
- KA120303 Current electron accelerator-based projects,
- KA130303-1 Current non-accelerator-based projects,