



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
SCIENCE

DOE High Energy Physics Facilities Subpanel Charge and Context

**HEPAP Meeting
March 11, 2013**

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Subpanel Charge from Bill Brinkman(1)

,DOE has established several Priority Goals,including the following goal for the Office of Science:

Goal Statement: Prioritization of scientific facilities to ensure optimal benefit from Federal investments. By September 30, 2013, formulate a 10-year prioritization of scientific facilities across the Office of Science based on (1) the ability of the facility to contribute to world-leading science, (2) the readiness of the facility for construction, and (3) an estimated construction and operations cost of the facility.

Charge(2)

To accomplish this goal, DOE will undertake the following steps. We will need your help with step #2, as described below.

1. The DOE/SC Associate Directors will create a list of proposed new scientific user facilities or major upgrades to existing scientific user facilities that could contribute to world leading science in their respective programs from 2014 to 2024 (the timeframe covered by this goal).

2. The information developed by the DOE/SC Associate Directors will be used by the DOE/SC as the basis for engagement with the DOE/SC Federal Advisory Committees and others to seek advice and input on new or upgraded scientific user facilities necessary to position the DOE/SC at the forefront of scientific discovery. The Federal Advisory Committees will seek additional outside input as necessary. In particular, for programs that have a significant existing or potential user base outside of the DOE/SC, the Federal Advisory Committees will be encouraged to seek input from the broader scientific community and existing facility user committees...please consider only those facilities that require a minimum investment of \$100 million.

Charge(3)

3. Finally, with input from the DOE/SC Federal Advisory Committees and other stakeholders, the DOE/SC Director will prioritize the proposed new scientific user facilities and major upgrades across scientific disciplines according to his/her assessment of the scientific promise, the readiness of the facility to proceed to construction, and the cost of construction and operation. In making this prioritization, the DOE/SC Director will consider the resource needs for research support and for robust operation of existing facilities and will engage leaders of other relevant agencies and the Administration to ensure priorities are coordinated with related investments by other agencies and reflect cross-agency needs where appropriate.

Charge(4)

Please provide me with a short letter report that assigns each of the facilities to a category and provides a short justification for that categorization in the following two areas, but do not rank order the facilities:

1. The ability of the facility to contribute to world-leading science in the next decade (2014- 2024). Please place each facility or upgrade in one of four categories:(a) absolutely central;(b) important;(c) lower priority;and (d) don't know enough yet.

2. The readiness of the facility for construction. Please place each facility in one of three categories: (a) ready to Initiate construction;(b) significant scientific/engineering challenges to resolve before initiating construction;and (c) mission and technical requirements not yet fully defined

Context (Excerpts from Fleming-Siegrist Letter)

Fundamentally this is a multi-step process with several important milestones over the coming year, and each step will inform and prepare for the next.

First, DOE Office of Science (SC) Director Bill Brinkman issued a charge in December to the SC advisory committees to get their advice on the scientific impact and technical maturity of planned and proposed SC Facilities, in order to develop a coherent plan (Sept.30) for future DOE/SC facilities over the next 10 years. Only facilities with a large projected DOE program contribution (>\$100 million) to fabrication over this time frame will be considered.

Next, the DPF-led Snowmass process...will not recommend priorities but it can certainly have strong input to the upcoming prioritization process ..., and can make statements about the sense of the community regarding the importance and impact of these future concepts. **We urge participation by the entire US community in developing a common vision for the future of HEP.** ... from the funding agency perspective, the (SNOWMASS) report would be much more useful if it makes some scientific judgments, for example the extent to which each proposed project would address the most important scientific questions, and whether there are other ways to answer these questions.

Context (2)

Finally, the funding agencies expect to charge HEPAP with establishing a new program prioritization subpanel (a.k.a. P5) around the time of the completion of the Snowmass process. HEPAP/P5 will use the input from Snowmass, along with budgetary and other input from DOE/NSF, to recommend a new strategic plan for US HEP in various scenarios.

The agencies are concerned that the scope of the work of P5 is very large, especially given current budget uncertainties. We will discuss tomorrow options for developing some aspects of the P5 report, such as the value R&D in HEP presents to society, to a complementary subpanel or other community process.