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| **EIC PROJECT** – JLab STATUS SHEET – 12/18/2024DOE Program Manager: Ivan Graff DOE FPD: Robert Caradonna (BNL) Deputy FPD Bryan Foley (JLab) |
| **Mission Need:** The EIC mission need statement (MNS) was signed by the program secretarial officer (PSO) on January 22, 2019, and approval of Critical Decision-0 (CD-0) was signed by the Chief Executive for Project Management (CE) on December 19, 2019. Contact the DOE Program Manager for a copy of the MNS.**Project Scope:** The EIC Project will design, build, and install the hardware and infrastructure for a new electron storage ring, an electron injector, and modifications to the Relativistic Heavy Ion Collider (RHIC) hadron ring required to produce an electron-ion collider. It will include one interaction region with an allowance for a second and one detector. The facility is designed to meet requirements to ensure high reliability and availability for the user program. Jefferson Lab is a major partner on EIC with BNL as the Host Lab.**Major Procurement Packages:** The CD-3A approved major procurements are a satellite cryogenic refrigeration plant and a detector solenoid magnet. The latter may become an in-kind contribution from foreign partners. (The third piece of 3A scope approved for JLab, the 591 MHz first article cryomodule, consists of numerous smaller procurements.) | **Level 1 Milestones** |
| **Milestones** | **Preliminary Baseline** | **Forecast/Actual** |
| CD-0, Approve Mission Need |  | 12/19/19 (A) |
| CD-1, Approve Alternative Selection and Cost Range |  | 6/19/21 (A) |
| CD-3A Approve Long Lead Procurements |  | 3/28/24 (A) |
| CD-3B Approve Long Lead Procurements | Not baselined | Q2FY25 (F) |
| CD-2/3C, Approve Performance Baseline and Long Lead Procurements | Not baselined | Q2FY26 (F) |
| CD-3, Approve Construction Start | Not baselined | Q2FY27 (F) |
| CD-4 Early Finish- Approve Start of Operations | Not baselined | Q4FY34 (F) |
| **Key Performance Metrics – Covers Status Through 11/30/2024 CD-3A Scope only** | **Latest Status** * EIC@JLab Deputy Project Director interviews completed.
* Magnet measurement bench received from ANL and installed in Building 36.
* Shipping of magnets to BNL on track for December start.
* 591 MHz FA CM RF Design Review (status review) conducted Dec 3-4.
* Draft 2025 PEMP Notable Evidentiary Accomplishments provided by NP.

**Latest Issues*** FY25-26 funding remains concerning; impacts would not be felt until FY26.
* Project implementing subprojects under DOE guidance.
* Electron injector system technical design choices under discussion; concept chosen will impact subproject priorities.

**Contingency:** When Project reaches CD-2 baseline, contingency will be managed at the project level at BNL.**Safety:** DART RATE: 0 RECORDABLE RATE: 0 |
| ACWP: $390 BCWS: $10,094 BCWP: $0 BAC: $33,330,547CPI: 1\* SPI: 1\* % Complete: 0 EAC: $33,369,444 |
| \* 1 procurement awarded to date |
| **Accomplishments and Upcoming Activities** |
| CD-3A ESAAB Approval | 3/28/24 (A) |
| DOE approval of RFP for satellite refrigeration plant | 9/24/24 (A) |
| CD-3B and Annual Status Director’s Review | 10/22/24-10/25/24 (A) 10/22/24-10/25/24 (P) |
| CD-3B and Annual Status Independent Project Review | 1/7/25-1/9/25 (P) |
| CD-3B ESAAB Approval | Q2FY25 (P) |
| 591 MHz FA RF Cavity and Beamline FDR | April 2025 (P) |
| Award satellite refrigeration plant contract (CD-3A) | June 2025 (P) |
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| **Risk, Mitigations, Impacts (on JLab EIC scope)*** Technical risks on the 591 MHz cryomodule are successfully being mitigated at the cost of schedule. Risk is being controlled through additional oversight, including an advisory board of world-experts on similar designs. RF design (technical status) review held Dec 3-4 to confirm progress to date and future direction.
* Preserved cost competition on satellite cryoplant RFP by extending due date from Dec to Feb 10 to ensure participate of additional vendor. Team is planning for efficient evaluation of proposals to regain schedule.
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| **Funding and Utilization Status (JLAB ONLY)** |
| Item | FY2020 | FY2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY2026 | FY 2027 | FY 2028 | FY 2029-2034 | Total |
| TEC Funding Baseline | $0.0M | $1.32M | $37.06M | $11.72M | $23.75M | $5.275M\* | TBD | TBD | TBD | TBD | $79.13M / Total TBD |
| TEC Cost | $0.0M | $0.0M | $2.06M | $10.24M | $19.70M | $3.65M |  |  |  |  | $35.65M  |
| TEC Cost & Commitments | $0.0M | $0.0M | $2.21M | $10.91M | $22.22M | $5.94M |  |  |  |  | N/A  |
| Remaining Contingency  | **The EIC project is not yet baselined. Once baselined, contingency will be managed at the project level at BNL.** |
| OPC Funding Baseline | $3.5M | $5.42M | $7.05M | $4.54M |  $0.63M | TBD | $0 | $0 | $0 | TBD | $21.14M / Total TBD |
| OPC Costs | $1.88M | $4.23M | $6.36M | $5.29M | $2.31M | ($0.01M) |  |  |  |  | $20.06M  |
| OPC Costs & Commitments | $1.96M | $6.52M | $7.08M | $6.65M | $3.28M | $0.82M |  |  |  |  | N/A |
| **TPC Costs & Commitments** | **$1.96M** | **$6.518M** | **$9.29M** | **$17M** | **$25.50M** | **$6.77M** |  |  |  |  | **N/A** |

\*FY25 TEC is showing funding received to date. Anticipated full year funding is $23.75-33.75M with most likely value of $27.5M