

Memo

Date: August 20, 2018
To: CBETA Advisory Committee
From: Berndt Mueller, Chair of the CBETA Oversight Board
Subject: Charge for the Advisory Committee meeting on October 8, 2018

The next meeting of the CBETA Advisory Committee will take place by teleconference on the morning of October 8, 2018. The Committee is asked to report to the CBETA Oversight Board on whether the project will be able to deliver the parameters listed in Table 1, on a schedule with the high level technical milestones shown in Table 2, and to offer advice on ways that the probability of technical success can be maximized.

There will be no opportunities for real-time executive sessions by the Advisory Committee during the teleconference, and so the close-out presentation by the AC at the end of the meeting will be limited to personal remarks from the committee members. Please make a written report available to the CBETA Oversight Board by October 31.

Please comment on the presentations that will report on:

1. **Fractional Arc Test:** technical successes, hardware performance, results achieved, and lessons learned.
2. **Technical readiness:** (Halbach girders, splitters, RF, et cetera). Delivery status, issues, and installation readiness in the intensive construction period leading up to technical milestones 7 and 8 (“Girder production run complete” and “Final assembly and pre-beam commissioning complete”).
3. **Beam commissioning:** planning, risk analysis, and contingencies.
4. **Response to recommendations:** from the February 2018 Advisory Committee meeting.

cc: E. Giannelis, G. Hoffstaetter, R. Michnoff, R. Patterson, S. Peggs, T. Roser, K. Smolenski, J. Thom-Levy, D. Trbojevic.

Table 1: Key Performance Parameters and ultimate design parameters.

Parameter	Unit	KPP	Design
Electron beam energy	MeV		150
Electron bunch charge	pC		123
Electron source current	mA	1	40
Bunch repetition rate (source)	MHz		325
RF frequency	MHz	1300	1300
Injector energy	MeV		6
RF operation mode			CW
Number of ERL passes		1	4
Energy aperture of arc		2	4

Table 2: High level technical milestones.

#	Technical milestone	Contract	Actual	Forecast
	NYSERDA funding start date		31-Oct-16	
1	Engineering design documentation complete	31-Jan-17	31-Jan-17	31-Jan-17
2	Prototype girder assembled	30-Apr-17	30-Apr-17	30-Apr-17
3	Magnet production approved	30-Jun-17	23-Jun-17	30-Jun-17
4	Beam through Main Linac Cryomodule	31-Aug-17	16-Jun-17	31-Aug-17
5	First production hybrid magnet tested	31-Dec-17	21-Dec-17	31-Dec-17
6	Fractional Arc Test: beam through MLC & girder	30-Apr-18	20-Apr-18	30-Apr-18
7	Girder production run complete	30-Nov-18		30-Nov-18
8	Final assembly & pre-beam commissioning complete	28-Feb-19		28-Feb-19
9	Single pass beam energy scan	30-Jun-19		30-Jun-19
10	Single pass beam with energy recovery	31-Oct-19		31-Oct-19
11	Four pass beam with energy recovery (low current)	31-Dec-19		31-Dec-19
12	Project complete	30-Apr-20		30-Apr-20