

**NCSX Conceptual Design Cost Estimate Summary Form
(Attachment 1a)**

SUMMARY DESCRIPTION

WBS Number: 412	Title: Experimental AC Power Systems
Originator: Raki Ramakrishnan	
<u>Description</u>	
<p>This WBS element consists of the effort to design and reconfigure existing experimental AC power systems. This WBS element covers the work associated with the use of the D-site Pulsed AC Power 13.8kV distribution systems for NCSX, including reactivation of feeders not in use since TFTR along with minor changes to the lockout and E-stop interlocks which must now interface with the NCSX interlock system. The D-site Pulsed AC Power System, including the MG sets, and 13.8kV SV1/SV2 buses will be shared by NCSX and NSTX. In addition, some of the SV1/SV2 switchgear, feeders, and transformers will be shared. Other SV1/SV2 switchgear, feeders, and transformers not presently in use by NSTX and not used since TFTR operations might need to be reactivated.</p> <p>WBS 5 to provide interface for Lockout and E-Stop features. WBS 5 to provide interface for Lockout and E-Stop features.</p> <p><u>Description of Existing Equipment/Facilities to be Reused:</u> The existing D-site pulsed AC power system, including the MG sets, the 13.8 kV SV1/SV2 buses will be shared by NCSX and NSTX. In addition, some of the SV1/SV2 switchgear, feeders, and transformers will be shared. Other SV1/SV2 switchgear, feeders, and transformers not presently in use by NSTX and not used since TFTR operations will need to be reactivated and used on NCSX.</p> <p><u>Description of Major Modifications Required to Existing Equipment/Facilities:</u> No major modifications are needed. However, an interface must be provided between the lockout and E-stop features with the NCSX interlock system.</p>	

Date: 9/15/03