

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

SUMMARY DESCRIPTION

WBS Number: 421	Title: C-Site AC/DC Converters																		
Originator: Raki Ramakrishnan																			
<u>Description</u>																			
<i>No work in this area is required for the fabrication project. Any modifications to the existing equipment will be funded by PPPL infrastructure improvement funds.</i>																			
<p><u>Description of Existing Equipment/Facilities to be Reused:</u> These power supplies were originally purchased for PBX-M duty. They were manufactured by the Robicon Corporation and were first put in service in 1987. They consist of 6-pulse bridges connected in parallel with an interphase transformer. The ratings are summarized as follows:</p>																			
<table style="margin-left: auto; margin-right: auto;"><thead><tr><th style="text-align: left;"><u>Parameter</u></th><th style="text-align: center;"><u>Value</u></th><th style="text-align: center;"><u>Units</u></th></tr></thead><tbody><tr><td>• No Load Avg. DC Voltage</td><td style="text-align: center;">300.0</td><td style="text-align: center;">volt</td></tr><tr><td>• Nominal DC Current</td><td style="text-align: center;">5.0</td><td style="text-align: center;">kA</td></tr><tr><td>• Nominal Pulse ESW</td><td style="text-align: center;">1.5</td><td style="text-align: center;">sec</td></tr><tr><td>• Nominal Pulse Repetition Period</td><td style="text-align: center;">80.0</td><td style="text-align: center;">sec</td></tr><tr><td>• Maximum Continuous DC Current</td><td style="text-align: center;">1.25</td><td style="text-align: center;">kA.</td></tr></tbody></table>		<u>Parameter</u>	<u>Value</u>	<u>Units</u>	• No Load Avg. DC Voltage	300.0	volt	• Nominal DC Current	5.0	kA	• Nominal Pulse ESW	1.5	sec	• Nominal Pulse Repetition Period	80.0	sec	• Maximum Continuous DC Current	1.25	kA.
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<p><u>Description of Major Modifications Required to Existing Equipment/Facilities:</u> No major modifications are needed other than routine maintenance to reactivate the existing C-site AC/DC converters. Possible minor modifications may be needed to the control interface.</p>																			

Date: 9/15/03