COMMITTEE: Facilities, Construction and Master Planning

ITEM: Approval of site and program for expansion of the Cougar Substation

DATE PREVIOUSLY SUBMITTED:

SUMMARY:
Approval is requested for the site and program for expansion of the Cougar substation to provide additional electrical capacity to the campus as well as a new underground distribution of electrical feeders from substation to each building on ERP campus. This will mitigate the current vulnerability of overhead electrical service which is prone to weather related damages which is critical to the research conducted at ERP.

This project will also include the addition of 4th feeder from the Cougar substation to the Central Plant to serve growing electrical loads on the main UH campus while reducing loads on the three current electrical feeders.

The Project will include the study of expansion and associated design and construction. Completion scheduled for fall 2015.

SUPPORTING DOCUMENTATION: Cougar Substation Supporting Information

FISCAL NOTE:

RECOMMENDATION/ACTION REQUESTED: Administration recommends approval of this item

COMPONENT: University of Houston

PRESIDENT Renu Khator 1/31/12

EXECUTIVE VICE CHANCELLOR Carl Carlucci 1/27/2012

CHANCELLOR Renu Khator 1/31/12

02/15/2012
CONSENT DOCKET – FCMP-F24
The UH Energy Research Park (ERP) campus was originally built as Schlumberger Houston headquarters in 1953. This campus was purchased by UH in 2009 and designated as ERP with the intent to develop public/private research partnerships with the primary focus on research in energy.

Electrical service to ERP comes from an overhead residential distribution line, which is prone to outages. Present activities within ERP depend on reliable power so that valuable research is not adversely affected.

Currently there are two 33 MW transformers at Cougar substation with the campus peak load of almost 33MW leaving 33MW of redundancy in transformer. The project proposes to add one more 33 MW transformer thereby doubling the availability of redundant transformer capacity of 66MW. The known needs of ERP reflect 15MW capacity (with the exclusion of SuperPower tenant representing 15MW load in itself - to be accounted for via separate dedicated transformers).

The Cougar substation expansion also needs to include provision of a new underground distribution of electrical feeders from substation to each building on ERP campus. This will mitigate the current vulnerability of overhead electrical service which is prone to weather related damages.