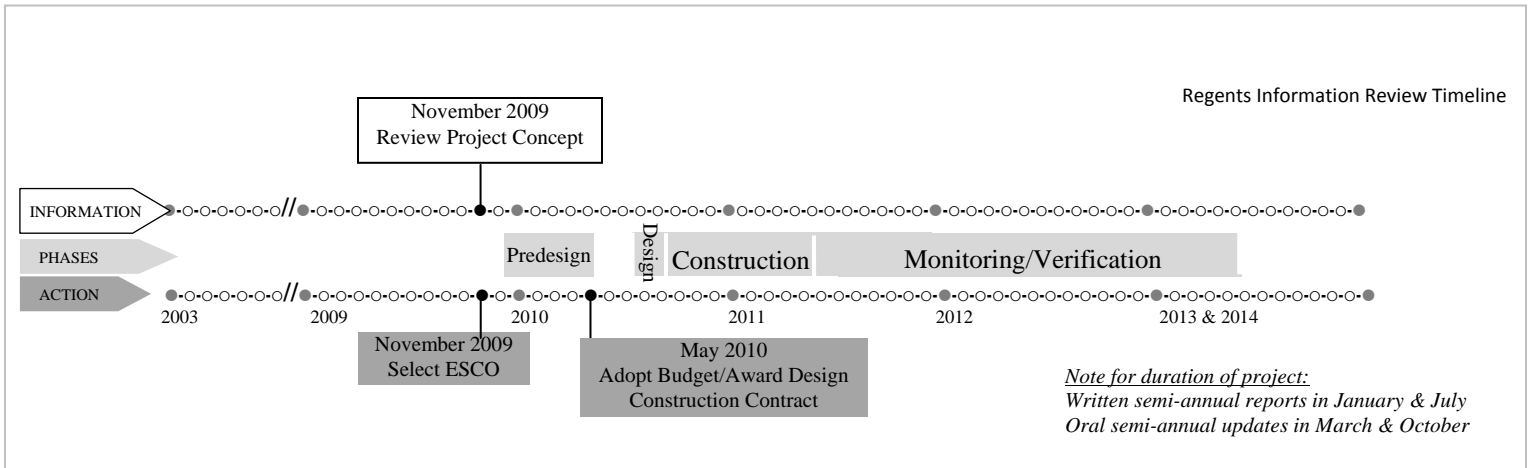


VII. STANDING COMMITTEES

B. Finance, Audit and Facilities Committee

Smart Grid Project – Adopt Budget and Delegate Authority to Award Energy Savings Performance Contracting (ESPC) Contract



RECOMMENDED ACTION:

It is the recommendation of the administration and the Finance, Audit and Facilities Committee that the Board of Regents establish the project budget at \$9.296 million and delegate authority to the President to award an Energy Savings Performance Contracting (ESPC) design/build performance contract to McKinstry Essention.

PROJECT DESCRIPTION AND SCOPE:

The purpose of the smart grid is to collect and communicate real time electrical demand and power generation data for modeling and analysis to test demand control and generation strategies.

The UW Smart Grid project will deploy smart meters in campus medium voltage power distribution system, selected generation facilities and 148 campus buildings. Thirty-two (32) building automation systems and eight (8) building lighting systems will be modified to send data to the smart grid. A private campus intranet network will be expanded to collect energy data. Two computer hardware and software systems will be purchased to analyze and model campus electrical loads.

The UW Smart Grid project Directed Energy Study (DES) identified numerous permanent energy saving measures that will be implemented.

VII. STANDING COMMITTEES

B. Finance, Audit and Facilities Committee

Smart Grid Project – Adopt Budget and Delegate Authority to Award Energy Savings Performance Contracting (ESPC) Contract (continued p. 2)

PREVIOUS ACTIONS:

In November of 2009, the Smart Grid Project concept was presented to the Board of Regents. At that meeting, the President was delegated authority to use McKinstry Essention under RCW 39.35C to perform the first stage of a DES to further define the scope of the project.

PROJECT SCHEDULE:

Aug 2009	UW signs letter of intent with Battelle Memorial Institute to participate in Pacific Northwest Smart Grid Demonstration Project
Nov 2009	Regents approve use of McKinstry Essention to perform DES
Dec 2009	UW initiates DES Notification of award of Pacific Northwest Smart Grid Demonstration Project grant to Battelle Memorial Institute
Feb 2010	Project Start: Battelle/Doe sign Coop Agreement
Mar 2010	UW Completes DES
May 2010	Regents adopt budget/delegate authority to award ESPC contract
June 2010	UW signs cooperative agreement with Battelle
June 2010	UW signs ESPC contract for design and construction
Oct 2010	Construction Start
May 2012	Construction Substantial Completion
July 2014	Completion of Monitoring and Verification
Jan 2015	Project Complete

CURRENT PROJECT STATUS:

Under delegated authority, the Capital Projects Office entered into a DES with McKinstry Essention to further define the UW Smart Grid Project scope, schedule, guaranteed maximum price, and energy saving measures. This study is now complete and coordinated with external requirements from the primary American Recovery and Reinvestment Act grant holder, Battelle, as well as the smart grid software vendor, Spirae, Seattle City Light, and UW Internet Technology.

CONTRACTING STRATEGY:

The President was previously authorized to initiate a DES which is the first step in award of an ESPC contract. Upon completion of the DES and identification of cost effective energy savings measures, a design/build contract is negotiated with the ESPC contractor. The President requests approval to award an ESPC contract

VII. STANDING COMMITTEES

B. Finance, Audit and Facilities Committee

Smart Grid Project – Adopt Budget and Delegate Authority to Award Energy Savings Performance Contracting (ESPC) Contract (continued p. 3)

to McKinstry Essention. The ESPC contract will be a cost plus percent fee design/build contract with a guaranteed maximum price and an energy savings performance guarantee. The guaranteed maximum price contract amount is \$5,902,682 excluding contingency and Washington State sales tax.

PROJECT BUDGET & FUNDING:

Source of Funds:

Dept of Energy ARRA Grant	\$4,473,000
State Treasury Lease Purchase Loan*	\$2,300,000
Building Renewal Reserve Fund	\$ 911,000
Seattle City Light Rebates	\$ 500,000
In-Kind Donations	\$1,112,000
=====	
	\$9,296,000

*State Energy Saving projects are financed through a loan from the State Treasury Lease Purchase Program. The loan is repaid from \$320,993 annual energy savings that are guaranteed by the ESPC contractor and are paid out of the University’s utility budget.

Uses of Funds:

UW Smart Grid Project**	\$9,296,000
=====	
	\$9,296,000

**See Attached Summary of Project Budget

PROJECT RISKS & OPPORTUNITIES:

ARRA Reporting: The UW/Battelle Cooperative Agreement will define the project reporting requirements. The project team will “flow-down” all Battelle reporting requirements to UW contractors and vendors. Based on current language included in draft agreement documents, the project team is confident that all parties will be able to manage the required reporting without significant risk.

Data Collection and Analysis Commitments: The project team has retired most of the infrastructure construction risks identified through development of the DES and productive scope discussions with Battelle. Currently, the UW sub-project Statement of Work is under review by Battelle. Battelle has committed to provide

VII. STANDING COMMITTEES

B. Finance, Audit and Facilities Committee

Smart Grid Project – Adopt Budget and Delegate Authority to Award Energy Savings Performance Contracting (ESPC) Contract (continued p. 4)

more detailed expectations for data collection and analysis. The project team intends to retire this risk prior to signing the cooperative agreement in June 2010.

Cash Flow Risks: Due to the complex financial structure of the project funding; protracted reimbursement schedules; and multiple levels of invoice approvals required; the project team has identified cash flow risks related to timing of payments and availability of funds. The UW has developed a detailed cash flow projection and is in discussions with UW Treasury Office, vendors and Battelle to identify any funding gaps and develop a funding schedule to meet cash flow needs.

Cyber security and interoperability opportunity: UW Information Technologies best management practice to insure cyber security for the new and existing electrical assets included in this project is to deploy a private intranet network referred to as a Virtual Routing Forwarding (VFR) network. UW Technology is currently installing a portion of this system on another project. The cost to extend the VFR for the Smart Grid project is approximately \$330,000. Funding is currently identified for provision of this network from UW Building Renewal Reserve Fund. Discussions are on-going with Battelle to secure federal matching fund commitments for this scope.

Tax Deferral Opportunity: UW Tax Office has completed an analysis of possible tax deferral options available to the project. The analysis recommends pursuing the Manufacturers' Sales and Use Tax Exemption. Sales tax is currently included in the budget.

Attachment

Summary Project Budget

**UNIVERSITY OF WASHINGTON
CAPITAL PROJECTS OFFICE - SUMMARY PROJECT BUDGET
Energy Services Performance Contract (ESPC)**

PROJECT: Smart Grid Demonstration Project

Project Number: 203138

ESTIMATED DATE OF COMPLETION: June 2014

<u>Project Budget</u>	<u>Total Escalated Cost</u>	<u>% of TPC*</u>
Consultant Services	\$ 105,000	1%
Design Services Contingency	\$ 15,000	0%
Consultant Services	\$ 120,000	1%
ESPC - Design/Build Cost	\$ 5,903,000	64%
Design/Build Contingencies	\$ 120,000	1%
Sales Tax	\$ 548,000	6%
Construction	\$ 6,571,000	71%
Equipment	\$ 896,000	10%
Equipment Sales Tax	\$ 85,000	1%
Other Costs	\$ 1,216,000	13%
Project Management	\$ 408,000	4%
Other	\$ 2,605,000	28%
Total Project Cost (TPC)*	\$ 9,296,000	100%

Included in Above:

Escalation through June 2014

(ESPC contracts escalation risk is included in contract guaranteed maximum cost and carried by ESCO)