

## Capital Budget Request

Renew Central Power House Systems	
Overview	
Agency	Virginia Polytechnic Institute and State University (208)
Project Code	none
Project Type	Improvements-Other
Biennium	2022-2024
Budget Round	Amended Bill
Bill Version	Regular Session
Request Type	New Project
Project Location	Roanoke Area
Facility/Campus	Power Plant
Source of Request	Agency Request
Infrastructure Element	Maintenance / Repairs
Contains O & M costs? No	
Contains significant technology costs? No	
Contains significant energy costs? No	
Possible that project will be used by other than a state or local governmental entity, or for research under sponsored programs (higher education)? No	
Agency Narrative	
<p>Agency Description</p> <p>Executive Summary:</p> <p>Virginia Tech places a high priority on facility maintenance and mitigating deferred maintenance. The university's commitment is demonstrated by fully embracing the state's FICAS system for facility monitoring, aggressively addressing repairs, exceeding the 85 percent E&amp;G Maintenance Reserve spending requirement every biennium since the introduction of the performance requirement, establishing a nongeneral fund Maintenance Reserve program in 1996 for its auxiliary enterprises, and allocating funds to address routine maintenance funding.</p> <p>The state's General Fund Maintenance Reserve program has been the lynchpin for the university to address deferred maintenance for its E&amp;G facilities. However, several facilities have deferred maintenance needs that exceed the limits of the Maintenance Reserve program.</p> <p>The Capital Budget Request Instructions released in July 2022 include a new capital priority for "funding requests to address a significant maintenance reserve-type issue at an existing facility", and this request is to conduct system renewals in the central Power House.</p> <p>Project Description:</p> <p>The Power House was built in 1928 and has a Facility Condition Index score of 35 percent. It houses the campus steam turbine generator and is essential to campus operations. The campus operates at approximately 30 megawatts and the Power Houses produces up to six megawatts of electrical power required for the Educational and General programs. The balance of electric power for campus is sourced from AEP.</p> <p>The concrete structure in the basement exhibits significant spalling, exposure of steel rebar, and other signs of deteriorating building materials. Several building systems including windows, electrical and lighting, and bathrooms have exceeded the original design life and are no longer responsive to routine maintenance or Maintenance Reserve projects.</p> <p>This project request is to refurbish the building systems to include the exterior envelope, structural concrete, window system, electrical and lighting systems, control room mechanical systems, and bathroom facilities.</p> <p>These repairs would extend the service life of the building by 25 years.</p>	

Justification

Program Description:

Please see the Project description section.

Funding Plan:

The scope of this project supports the Educational and General mission of the campus; thus, the funding plan calls for 100 percent General Fund support for this project.

Options Considered:

Deferring the project was considered but not selected because the progressive deterioration of building increases the risk to operations and the desire to ensure continuous operations prior to reaching a critical event or impact on services.

Implementing the significant repairs through Maintenance Reserve is not an option because the project cost is beyond the \$2 million threshold.

Methodology

The project cost in 2022 dollars is \$6.2 million. The project costs are estimated to a mid-point of construction in 2024 using the current CR-1 Project Planning form (as of July 2022).

The 2022 project cost amount is based on internal estimates developed by university staff using historical comparables of on-campus work. The costing analysis utilized past and current projects that concerned infrastructural repairs in an energy plant setting. The project is planned to utilize the traditional Design, Bid, Build delivery method.

**Funding Request**

Phase	Year	Subobject	Fund	Amount
Full Funding	2024	2322 - Construction, Buildings	01000 - General Fund	\$8,119,000
Total				\$8,119,000

**Project Costs**

Cost Type	Requested Funding
Acquisition Cost	\$0
Building & Built-in Equipment	\$7,333,000
Sitework & Utility Construction	\$0
<b>Construction Cost Total</b>	<b>\$7,333,000</b>
<b>DESIGN &amp; RELATED SERVICE ITEMS</b>	
A/E Basic Services	\$280,000
A/E Reimbursables	\$1,000
Specialty Consultants (Food Service, Acoustics, etc.)	\$0
CM Design Phase Services	\$0
Subsurface Investigations (Geotech, Soil Borings)	\$0
Land Survey	\$0
Archeological Survey	\$0
Hazmat Survey & Design	\$0
Value Engineering Services	\$0
Cost Estimating Services	\$0
Other Design & Related Services	\$7,000
<b>Design &amp; Related Services Total</b>	<b>\$288,000</b>
<b>INSPECTION &amp; TESTING SERVICE ITEMS</b>	
Project Inspection Services (inhouse or consultant)	\$33,000

Project Testing Services (conc., steel, roofing, etc.)	\$12,000
<b>Inspection &amp; Testing Services Total</b>	<b>\$45,000</b>
<b>PROJECT MANAGEMENT &amp; OTHER COST ITEMS</b>	
Project Management (inhouse or consultant)	\$29,000
Work By Owner	\$2,000
BCOM Services	\$0
Advertisements	\$0
Printing & Reproduction	\$0
Moving & Relocation Expenses	\$0
AV Cabling	\$0
IT Cabling	\$0
Telephone Cabling	\$0
AV Equipment	\$0
IT Equipment	\$0
Telephone Equipment	\$0
Signage	\$0
Demolition	\$0
Hazardous Material Abatement	\$0
Utility Connection Fees	\$0
Utility Relocations	\$0
Commissioning	\$16,000
Miscellaneous Other Costs	\$42,000
<b>Project Management &amp; Other Costs Total</b>	<b>\$89,000</b>
Furnishings & Movable Equipment	\$0
Construction Contingency	\$364,000
<b>TOTAL PROJECT COST</b>	<b>\$8,119,000</b>

### Size and Scope

Cost Type	Unit of Measure	Units	Cost Per Unit
Acquisition Cost		0	\$0
Construction Cost		0	\$0
Total Project Cost		0	\$0

### Supporting Documents

File Name	File Size	Uploaded By	Upload Date	Comment
<a href="#">+CR-1 Power House Renewal 8.4.22.xlsx</a>	594,381	Matthew Digman	8/5/2022	

### Workflow History

User Name	Claimed	Submitted	Step Name	Submit Action
Matthew Digman	08/03/2022 11:30 AM	08/03/2022 11:30 AM	Enter Capital Budget Request	Continue Working
Matthew Digman	08/03/2022 11:30 AM	08/03/2022 11:30 AM	Continue Drafting	Continue Working
Matthew Digman	08/04/2022 03:42 PM	08/04/2022 03:47 PM	Continue Drafting	Continue Working
Jennifer Hundley	08/04/2022 06:11 PM	08/04/2022 06:17 PM	Continue Drafting	Continue Working
Jennifer Hundley	08/04/2022 06:35 PM	08/04/2022 06:36 PM	Continue Drafting	Continue Working
Jennifer Hundley	08/04/2022 06:36 PM	08/04/2022 06:37 PM	Continue Drafting	Continue Working
Matthew Digman	08/05/2022 08:50 AM	08/05/2022 09:01 AM	Continue Drafting	Continue Working
Matthew Digman	08/05/2022 10:15 AM	08/05/2022 10:16 AM	Continue Drafting	Continue Working
Matthew Digman	08/05/2022 11:12 AM	08/05/2022 11:12 AM	Continue Drafting	Continue Working

Rob Mann	08/05/2022 11:47 AM	08/05/2022 11:55 AM	Continue Drafting	Submit for Agency Review
Rob Mann	08/05/2022 12:00 PM	08/05/2022 12:00 PM	Agency Review Step 1	Ready for DPB Bulk Submit
Rob Mann	08/05/2022 12:04 PM	08/05/2022 12:04 PM	Ready for DPB Submission	Submit to DPB
			DPB Review	