UCONN
UNIVERSITY OF CONNECTICUT

February 26, 2020

TO: Members of the Board of Trustees

FROM: Scott A. Jordan
Executive Vice President for Administration and Chief Financial Officer

John A. Elliott
Interim Provost and Executive Vice President for Academic Affairs

RE: Project Budget for Supplemental Utility Plant Project
(Final: $67,000,000)

RECOMMENDATION:

That the Board of Trustees approve the Final Budget of $67,000,000, as detailed in the attached project budget, for the Supplemental Utility Plant Project, for Construction. The project will house only equipment that enables the completion of the Next Generation CT Science program, including heating and cooling for the Gant Science Complex renovation and the STEM Research Center - Science 1 new building. The Administration recommends that the Board of Trustees adopt the Resolution below.

RESOLUTION:

"Be it resolved that the Board of Trustees approve the use of $67,000,000 in UCONN 2000 bond funds for the Supplemental Utility Plant Project."

BACKGROUND:

Utility modeling has shown that additional chilled water, steam, and electrical power will be needed to complete the renovation of the Gant Science Complex and the construction of the STEM Research Center - Science 1 building, both of which are key elements in the State's Next Generation CT program.

To meet these additional loads, a new Supplemental Utility Plant (SUP) will be constructed in the Northwest Science Quad District, but it will include only equipment required to complete Gant and Science 1. Equipment to generate electricity is NOT included, pending the study of renewable energy resources and the reduction of carbon emissions by the Trustees, Administration, Faculty and Students (TAFS) committee, the Solve Climate by 2030 committee, and the President's Working Group on Sustainability.

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To meet the immediate Gant and Science 1 needs for heating and cooling, and the need for an upgrade to the existing campus power interconnection and distribution system, the SUP will include:

- Two steam chillers and two electric chillers;
- An upgraded electrical utility connection to re-establish the original University operating requirements for campus electrical power distribution, allowing the campus to be serviced fully by either local UConn Cogenerated Clean Heat and Power Distributed Generation Resource Micro-Grid power or purchased imported power from the Eversource grid;
- Two emergency generator(s) to support emergency power demands for Gant Science Complex and Science 1;
- Space allocation and provisions for one (1) steam boiler as part of the replacement of four (4) aging boilers located at the Central Utility Plant (CUP) which are required to be phased out of service by 2023 due to DEEP/EPA regulatory emissions caps. The new dual-fuel efficient steam boilers will reduce greenhouse gas emissions by 3.5% - 5.25% from current levels.

Formerly known as SUP Phase 2, construction to enhance the local UConn Cogenerated Clean Heat and Power Distributed Generation Resource Micro-Grid tri-generation to increase the current capacity to service projected campus needs is **on hold,** pending the outcome of the sustainability committees and working groups.

The Supplemental Utility Plant Project is currently in the Pre-Construction Phase. Planning began in January 2018 and the project was bid in January 2020. Construction is to be coordinated with the STEM Research Center – Science 1 project and Gant Phase 2 renovations and is anticipated to begin in Spring 2020 and to be complete in Winter 2021.

The estimated total project cost is $67 million. The Final Budget is based on reconciled estimates of construction costs prepared by the project consultant and construction manager. The University intends to issue construction contracts on receipt of satisfactory bids and the development of a Guaranteed Maximum Price.

The project is being constructed utilizing a Project Labor Agreement.

The Final Phase Budget is attached for your information.

Attachment

CAPITAL PROJECT BUDGET REPORTING FORM

TYPE BUDGET: FINAL

PROJECT NAME: SUPPLEMENTAL UTILITY PLANT

BUDGETED EXPENDITURES	APPROVED PLANNING 9/27/2017	APPROVED DESIGN 6/26/2019	PROPOSED FINAL 2/26/2020
CONSTRUCTION	$ 200,000	$ 200,000	$ 51,450,000
DESIGN SERVICES	3,830,000	3,830,000	4,400,000
TELECOMMUNICATIONS	-	-	500,000
FURNITURE, FIXTURES AND EQUIPMENT	-	-	50,000
CONSTRUCTION ADMINISTRATION	-	-	-
OTHER AE SERVICES (including Project Management)	230,000	230,000	3,300,000
ENVIRONMENTAL	60,000	60,000	100,000
RELOCATION	-	-	-
INSURANCE AND LEGAL	30,000	30,000	50,000
MISCELLANEOUS	-	-	-
OTHER SOFT COSTS	150,000	150,000	150,000
SUBTOTAL	$ 4,500,000	$ 4,500,000	$ 60,000,000
PROJECT CONTINGENCY	500,000	500,000	7,000,000
TOTAL BUDGETED EXPENDITURES	$ 5,000,000	$ 5,000,000	$ 67,000,000
SOURCE(S) OF FUNDING*			
UCONN 2000 BOND FUNDS	$ 5,000,000	$ 5,000,000	$ 67,000,000
TOTAL BUDGETED FUNDING	$ 5,000,000	$ 5,000,000	$ 67,000,000

* This budget reflects the University's current intended source(s) of funding for the specified project. The University may adjust this funding plan in order to ensure compliance with applicable federal and state law(s) or to strategically utilize all fund sources, within the approved budget amount, as appropriate.

SUPPLEMENTAL UTILITY PLANT
Project Budget (FINAL)
February 26, 2020

Supplemental Utility Plant lower level – from King Hill Road

Supplemental Utility Plant (right) with Science One at left

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June 26, 2019

TO: Members of the Board of Trustees

FROM: Scott A. Jordan
Executive Vice President for Administration and Chief Financial Officer

John A. Elliott
Interim Provost and Executive Vice President for Academic Affairs

RE: Project Budget for Supplemental Utility Plant Project (Phase 1)
(Design: $5,000,000)

RECOMMENDATION:

That the Board of Trustees approve the Design Budget of $5,000,000, previously approved for the Planning Phase as detailed in the attached project budget, for the Supplemental Utility Plant Project (Phase 1), for Planning and Design. The Administration recommends that the Board of Trustees adopt the Resolution below.

RESOLUTION:

"Be it resolved that the Board of Trustees approve the use of $5,000,000 in UCONN 2000 GO bonds for the Supplemental Utility Plant Project (Phase 1)."

BACKGROUND:

The University produces or treats and distributes its own electrical power, steam, chilled water domestic water, reclaimed water, and sanitary waste.

Utility modeling has shown that additional chilled water, steam, and electrical power will be needed to support the development of the Storrs Campus as projected by the University Master Plan and Next Generation Connecticut Capital Plan.

The University has determined that to meet these additional loads a new Supplemental Utility Plant will be constructed in the Northwest Science Quad District.

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The plant will include:

Phase 1

- New chiller(s) required to be in place in order to support the Gant Science renovations Phases 2 and 3, and Science One (2020);
- An upgraded electrical utility connection to support the new Science 1 building (2021) and to re-establish the original University operating requirements for campus electrical power distribution which allowed the campus to be fully serviced by either UConn Cogen power produced at the Central Utility Plant (CUP) or imported power from the Eversource grid;
- Emergency generator(s) to support emergency power demands for Gant and Science One is completed (2023);
- Space allocation and provisions for a steam boiler as part of the replacement of the aging boilers located at the CUP which are required to be phased out of service in 2023 due to regulatory emissions caps.

Phase 2

- Electrical tri-generation production in order to increase the current capacity in order to service projected campus needs.

The project will be constructed in two phases. Phase 1 will include the new Supplemental Utility Plant building sufficiently sized to house only those components necessary to support the Science 1 and Gant renovations. The estimated total project cost of Phase 1 is $65 million. Phase 2, which includes a building addition and new electrical generating turbines, has an estimated total project cost of $40 - 60 million.

The Supplemental Utility Plant Project (Phase 1) is currently in the Design Phase. Planning began in January 2018 and the project will bid in Fall 2019. Construction is to be coordinated with the Science 1 project and Gant Phase 2 renovations and is anticipated to begin in Winter 2020 and to be complete in Fall 2021.

The Design Phase Budget is based on order of magnitude estimates of construction costs prepared by the project consultant and the Construction Manager.

The project will be constructed utilizing a Project Labor Agreement.

The Design Phase Budget is attached for your information.

Attachment

CAPITAL PROJECT BUDGET REPORTING FORM

TYPE BUDGET: DESIGN

PROJECT NAME: SUPPLEMENTAL UTILITY PLANT

BUDGETED EXPENDITURES	**APPROVED PLANNING 9/27/2017**	**PROPOSED DESIGN 6/26/2019**
CONSTRUCTION	$ 200,000	$ 200,000
DESIGN SERVICES	3,830,000	3,830,000
TELECOMMUNICATIONS	-	-
FURNITURE, FIXTURES AND EQUIPMENT	-	-
CONSTRUCTION ADMINISTRATION	-	-
OTHER AE SERVICES (including Project Management)	230,000	230,000
ENVIRONMENTAL	60,000	60,000
RELOCATION	-	-
TELECOMMUNICATIONS	-	-
INSURANCE AND LEGAL	30,000	30,000
MISCELLANEOUS	-	-
OTHER SOFT COSTS	150,000	150,000
SUBTOTAL	$ 4,500,000	$ 4,500,000
PROJECT CONTINGENCY	500,000	500,000
TOTAL BUDGETED EXPENDITURES	$ 5,000,000	$ 5,000,000
SOURCE(S) OF FUNDING*		
UCONN 2000 BOND FUNDS	$ 5,000,000	$ 5,000,000
TOTAL BUDGETED FUNDING	$ 5,000,000	$ 5,000,000

* This budget reflects the University's current intended source(s) of funding for the specified project. The University may adjust this funding plan in order to ensure compliance with applicable federal and state law(s) or to strategically utilize all fund sources, within the approved budget amount, as appropriate.

SUPPLEMENTAL UTILITY PLANT PROJECT
Project Budget (DESIGN)
June 26, 2019

Supplemental Utility Plant lower level – from King Hill Road

Supplemental Utility Plant (right) with Science One at left

UCONN
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September 27, 2017

TO: Members of the Board of Trustees

FROM: Scott A. Jordan
Executive Vice President for Administration and Chief Financial Officer

Jeremy Teitelbaum
Interim Provost and Executive Vice President for Academic Affairs

RE: Project Budget for the Supplemental Utility Plant Project
(Planning: $ 5,000,000)

RECOMMENDATION:

That the Board of Trustees approve the Planning Budget of $5,000,000 for the Supplemental Utility Plant Project for Planning. The Administration recommends that the Board of Trustees adopt the Resolution below.

RESOLUTION:

"Be it resolved that the Board of Trustees approve the use of $5,000,000 in UCONN 2000 bond funds for the Supplemental Utility Plant Project."

BACKGROUND:

The University produces or treats and distributes its own electrical power, steam, chilled water domestic water, reclaimed water, and sanitary waste.

Utility modeling has shown that additional chilled water, steam, and electrical power will be needed to support the development of the Storrs Campus as projected by the University Master Plan and the STEM initiatives of Next Generation Connecticut Capital Plan, particularly the STEM Research Center Science 1 building.

The University has determined that these additional loads may best be produced in a new Supplemental Utility Plant in the Northwest section of campus.

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The Supplemental Utility Plant may include the following elements:

- New chiller(s) required to be in place in order to support the Gant Science Renovations Phase II (2020 completion)
- An upgraded electrical utility connection to support the new STEM Research Center Science 1 building (2021 completion). The upgraded connection will also re-establish the original design for the campus electrical power distribution, which allowed the campus to run on either UConn Cogen power produced at the Central Utility Plant (CUP) or power imported from the Eversource grid.
- Emergency generator(s) to ensure emergency power demands are met once STEM Research Center Science 1 building is completed.
- Steam boiler(s) to replace the aging boilers located at the CUP which are required to be phased out of service in 2023 due to regulatory emissions caps
- Electrical tri-generation equipment needed to increase electrical capacity necessary in order to supply projected campus needs.

The project will be constructed in two phases. Phase I will include the new Supplemental Utility Plant building, site improvements, chiller(s), emergency generator(s), and steam boiler(s). The estimated total project cost of Phase I is $20-30 million. Phase II includes installation of the electrical tri-generation equipment, which will be, determined during Phase I. Phase II has an estimated total project cost of $40-60 million.

The initial $5,000,000 budget is for the design of Phase 1 and planning for Phase II. Architect and Engineer selection has concluded allowing the University to engage a design firm.

The Supplemental Utility Plant Project is currently in the Planning Phase. Planning began in Fall of 2016 and design documents will be completed in the summer of 2018. The project will bid in Fall 2018 and Phase 1 Construction is anticipated to begin in late 2018 / early 2019 and to be complete in 2020.

The Planning Budget is based on fee proposals received during the architect selection.

The Planning Phase Budget is attached for your information.

Attachment

CAPITAL PROJECT BUDGET REPORTING FORM

TYPE BUDGET: PLANNING

PROJECT NAME: SUPPLEMENTAL UTILITY PLANT

BUDGETED EXPENDITURES		**PROPOSED PLANNING 9/27/2017**
CONSTRUCTION	$	200,000
DESIGN SERVICES		3,830,000
TELECOMMUNICATIONS		-
FURNITURE, FIXTURES AND EQUIPMENT		-
CONSTRUCTION ADMINISTRATION		-
OTHER AE SERVICES (including Project Management)		230,000
ART		-
RELOCATION		-
ENVIRONMENTAL		60,000
INSURANCE AND LEGAL		30,000
MISCELLANEOUS		-
OTHER SOFT COSTS		150,000
SUBTOTAL	$	4,500,000
PROJECT CONTINGENCY		500,000
TOTAL BUDGETED EXPENDITURES	$	5,000,000
SOURCE(S) OF FUNDING		
UCONN 2000 BOND FUNDS	$	5,000,000
TOTAL BUDGETED FUNDING	$	5,000,000

SUPPLEMENTAL UTILITY PLANT PROJECT
Project Budget (PLANNING)
September 27, 2017

Conceptual Site layout including the Supplemental Utility Plant