

**APPROVED**  
**November 13, 2024**

*Melissa Bealon*  
Board Secretary Melissa Bealon

Item #D-1  
November 13, 2024

**CONSIDERATION AND APPROVAL OF NON-INSTRUCTIONAL CAPITAL  
PROJECTS FOR FISCAL YEAR 2024**

**Submitted for:** Approval.

**Summary:** This item recommends approving the non-instructional capital projects for the following Public University projects:

Northern Illinois University: Installation of Solar Panels

**Action Requested:** That the Illinois Board of Higher Education approve the project listed in this item.

STATE OF ILLINOIS  
BOARD OF HIGHER EDUCATION

**CONSIDERATION AND APPROVAL OF NON-INSTRUCTIONAL CAPITAL  
PROJECTS FOR FISCAL YEAR 2024**

The Board of Higher Education Act (110 ILCS 205/8) requires public universities to receive IBHE approval for capital improvements for non-instructional uses, such as dormitories, field houses, stadiums, recreational facilities, parking lots and the like, if the project is in excess of \$2 million. The projects are assessed for alignment with the Board's Non-Instructional Capital Project Guidelines, approved by the Illinois Board of Higher Education in August 2002, and administrative rules. The projects must be consistent with the mission and scope of the institution; provide needed additional, replacement, or more efficiently utilized space; and are economically feasible, and aligned with the strategic plan, as required by administrative rules.

**Background and Scope**

The University partnered with a vendor to perform an investment grade audit energy assessment of the campus with the goal of building a more sustainable future and reducing operating costs for the university. The audit identified energy conservation measures targeting facility infrastructure, energy systems, and operational efficiency improvements. The developed scope of improvements, estimated at about \$56 million, focuses on about 50 top energy consuming campus buildings and included opportunities such as comprehensive building automation system upgrades, HVAC upgrades including dynamic energy storage systems, lighting upgrades, water conservation improvements, and solar power generation. A portion of the overall scope related to solar generation arrays on and around noninstructional facilities is estimated at about \$9.1 million.

The University is seeking IBHE approval to proceed with non-instructional capital improvements to install the solar panel arrays. The scope of work for this approval includes installation of solar panels, structural supports, racking (as required), inverters, monitoring systems, and any other equipment or components necessary for a complete and functional system at locations at the main campus of Northern Illinois University in DeKalb, Illinois, as outlined below.

1. Roof mounted solar array on the south facing side of Chessick Practice Center;
2. Ground mounted solar array to be located adjacent/northwest of Convocation Center;
3. Ground mounted solar array to be located adjacent/south of Convocation Center East Parking Lot; and
4. Carport solar array at the Visitor's Pay Lot off Carroll Avenue.

The combined estimated output of these four arrays equates to approximately five percent of the overall campus annual electricity consumption providing not only operational cost savings, but also a visual indication of the university's dedication to carbon reduction sustainability.

Estimated Project Schedule:

Final design and acquisition of solar panels to be complete by end of calendar year 2024  
Construction: Spring through Fall of 2025

## **Project Rationale**

In 2022, the University signed the Second Nature Commitment cementing the University's pledge to climate action and initiated the process to incorporate sustainability into campus life, strategic planning, and decision making. Following this commitment, the first campus Sustainability and Climate Action Plan was finalized. The plan serves as the high-level, strategic roadmap to a more sustainable future by pairing long-term goals with short-term actions to achieve net zero greenhouse emissions by 2050 or earlier.

The University conducted a greenhouse gas inventory to establish baseline data and to quantify annual emissions by source. The intention was to use the results to understand where to focus efforts at various stages of the journey to net zero. The inventory identified the use of nonrenewable energy as one of the largest contributors to the campus carbon footprint. Therefore, transitioning the campus to renewable energy sources represents one of the most impactful opportunities to make significant strides towards achieving decarbonization goals within the targeted timeline.

In addition to the environmental sustainability gains noted, this project also is able to significantly support operating cost reductions contributing to the financial sustainability of the university's future. It is estimated that the output of these solar arrays should be able to replace approximately five percent of the campus annual electrical needs. While the improvements planned under the overall \$56 million project vary on return on investment calculations, the collective simple payback is estimated to be less than 15 years.

## **Project Financing**

The total cost of this portion of the overall project is estimated to be \$9.1 million. The plan is to finance the project via the guaranteed energy savings factoring in applicable federal, state, and regional incentives over an approximately 20-year period through an Energy Services Contract. The financing strategy is to use the university's authority under 110 ILCS 685/30 related to Certificates of Participation financing. While final financing terms are yet to be determined, estimates made under current market conditions demonstrate overall energy and operational savings of \$144 million for the overall \$56 million project. After factoring in about \$8.2 million of rebate incentives, the average savings to the university are expected to be about \$1 million annually after financing debt expenses.

No student fee will be added to fund this project. This project was developed with the original intention of ensuring it could be financially supported from resulting energy and operational savings.

The Energy Services Contract includes a guarantee of the projected savings which will be validated and sustained through contractor-performed regular measurement and verification actions, and necessary maintenance of the improvements throughout a 20-year guaranteed performance period.

## **Constituency Input/Decision-making:**

This project was initiated to directly begin to address the Universities Second Nature Commitment and NIU's Sustainability and Climate Action Plan <https://www.niu.edu/sustainability/>

[resources/planning-reports.shtml](#). Per a recent Princeton Review survey of college applicants and their parents, more than 60% of students consider sustainability when considering whether to apply to a school. Students are increasingly aware of the impacts of climate change and other environmental crises on their lives. By demonstrating a commitment to sustainability, NIU positions itself as an attractive choice to recruit and retain students, as well as new faculty and staff.

This project provides an opportunity for experiential learning for students. The partnership with the intended company involves a collaboration to create experiential learning opportunities for undergraduate and graduate students at NIU and other partner universities. This partnership has already sponsored several senior capstone projects in mechanical engineering and is committed to expanding experiential learning and outreach opportunities in collaboration with other departments and the NIU STEAM outreach efforts.

The proposed project was presented to the Board of Trustees on Northern Illinois University Finance, Audit, Compliance, Facilities and Operations Committee on May 9, 2024, August 22, 2024, and subsequently on October 9, 2024. The project was approved to proceed conditional of finalization of financing arrangements.

### **Staff Recommendation**

Staff has reviewed the projects presented in this item and found them to be in accordance with the Board's Non-Instructional Capital Project Guidelines, approved by the Illinois Board of Higher Education in August 2002, and administrative rules. The projects are consistent with the mission and scope of the institution; provide needed additional, replacement, or more efficiently utilized space; and are economically feasible, as required by administrative rules.

*The Illinois Board of Higher Education hereby approves the Public University Non-Instructional Capital Project included in this item.*