



Highline Public Schools Board Action Report

☒ Supports the Strategic Plan

DATE: January 14 , 2022

FROM: Dr. Susan Enfield, Superintendent

LEAD STAFF: Scott Logan, Chief Operations Officer

Ellie Daneshnia, Executive Director of Capital Planning & Construction

For Introduction: January 19, 2022 For Action: February 2, 2022

I. TITLE Highline High School - Environmental Club Solar Project - Approval of Project Budget

II. WHY BOARD ACTION IS NECESSARY In accordance to Board Policy 6225 and Procedure 6225, all contracts and agreements for more than \$250,000 must be approved by the School Board.

III. BACKGROUND INFORMATION

As part of a February 2021 school board meeting, student representatives and community supporters of the Highline High School Environmental Club presented a proposal for installing a 100-kilowatt solar panel array on the rooftop of the new Highline High School building. School board members expressed enthusiastic support for the student-led project and the students' fundraising efforts. Students and community volunteers met with other elected officials, local business owners and numerous local organizations including the City of Burien, Sustainable Burien, Burien People for Climate Action, Seattle Southside Chamber of Commerce, Spark Northwest, Weed Warriors, EarthGen and ECOSS to share their idea and request support.

The 100-kilowatt system is roughly 252 solar panels, which will generate approximately 115,400 kWh of electricity every year. Based on the Helioscope report, this system will cover 14.3% of Highline High School's annual electricity consumption using statewide average electricity rate of \$.08275/kWh. Simple payback ranges from 38.4 years (excluding degradation, rate escalation, tax credits, depreciation) to 28 years (considering a .5% annual degradation and 3% annual electric escalation).

The Capital Planning & Construction Department hired Hargis Engineers to assist the district with the preliminary schematic design and engineering cost estimate for the proposed 100-kilowatt solar system. The electrical engineer's construction cost estimate is \$407,975, including Washington State sales tax and excluding \$17,000 design/soft cost.

The former and current HHS Environmental Club students and community supporters have now raised more than \$11,300, part of which is being held by the Highline Schools Foundation and part by the district, for the club; the funds are earmarked for the solar installation costs. These private donations represent financial support from more than 120 community members, alumni and foundations.

The school district worked with the student club to apply for a \$110,100 grant from state Department of Commerce Solar Energy Retrofits for Public Buildings program. The district received notification of the award, but it will not be publicly announced by the Department of Commerce until sometime in January 2022.

The student club and their volunteer mentors from Sustainable Burien also partnered with the non-profit organization Weed Warriors to apply for a Puget Sound Energy Clean Energy Community Grant of \$25,000 toward the installation costs; the PSE grantees have not yet been notified.

In addition, the district is working with the student club and community supporters to submit an application for \$125,000 in renewable energy credits (REC) from Seattle City Light's Green Up program. The deadline for application is January 31, 2022, with notification to recipients in the first quarter of 2022.

This solar project has been spearheaded by young women of color from Highline High School, with volunteer mentors and an ever-increasing network of community-based organizations and local residents. The staff cannot overstate the importance and service value of this project to these young leaders and to the larger community that has answered their call for support as a way of addressing climate change, environmental responsibility, conservation, and responding to inspirational youth leadership. The staff recommends the Board approve the project budget.

IV. RECOMMENDED MOTION

I move that the Highline School Board approve the expenditure of up to \$424,975 in capital bond funds, grants, possible credits, and donations, for the installation of a 100-kilowatt solar panel system on the rooftop of the new Highline High School building.

V. FISCAL IMPACT/REVENUE SOURCE

Fiscal impact to this action will be (amount and source including fund Example - \$522,000 from general fund Title 1 revenue).

--Secured non-district funds:

\$110,100 grant from the Washington State Department of Commerce

\$11,300+ funds raised by the Highline High School Environmental Club

TOTAL = \$121,400, reducing the cost from \$424,975 to \$303,575 in district Capital funds.

--Potential additional funding or renewable energy credits:

\$25,000 Puget Sound Energy grant, submitted by Weed Warriors on behalf of the HHS Environmental Club

\$125,000 in Renewable Energy Credits (REC) from Seattle City Light's Green Up program

TOTAL = \$150,000, if secured, would reduce the final costs further to \$153,575 in district Capital funds.

The revenue source for this motion is grants, donations and Capital Bond HHS project contingency funds.

Expenditure: ☒ One-time ☐ Annual

VI. APPLICABLE POLICY(S)

This action is in compliance with the following: Board Policy and Procedure 6225, and Policy 6020.

According to Policy 6020, System of Funds and Accounts, the district may use proceeds from the sale of voted bonds, including the interest earnings thereof, for capital purposes including improving the energy efficiency of the district's buildings or installing systems and components to utilize renewable and inexhaustible energy resources.

VII. ALTERNATIVES

The alternative is not installing the solar panels. District staff recommend approving this project since it had been led by young students, who are working to combat greenhouse gas emissions and reduce our collective dependence on fossil fuel.

VIII. COMMUNITY ENGAGEMENT

Community Engagement Required: ☐ Yes ☒ No

If yes, list community engagement conducted for this issue

IX. POLICY MONITORING PLAN

This ☐ new or ☐ revised policy will be monitored by the School Board:

☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Not Applicable

The metrics that will be used to monitor this policy include: _____

X. ATTACHMENTS

- Letters of Support from Community Organizations and School Board Vice President Joe Van, for Seattle City Light Renewable Energy Credits application.
- Department of Commerce grant application
- Electrical Cost Opinion



City of Burien
400 SW 152nd Street
Suite 300
Burien, WA 98166-1911

P 206.241.4647
F 206.248.5539

burienwa.gov

December 17, 2021

Seattle City Light
700 5th Ave
Seattle, WA 98104

Attn: Green Up Renewable Energy Credits Program

To the Selection Committee,

On behalf of the City of Burien, I am writing to express our City's support in the Highline High School Environmental Club's project to pursue a 100kW solar panel installation on the roof of Highline High School.

The City of Burien is dedicated to environmental sustainability and understands the urgency to act now on climate change. In November 2021, Burien City Council adopted the Burien Climate Action Plan. In Burien, commercial, residential, and industrial energy use accounts for about half (47%) of the city's total greenhouse gas (GHG) emissions. The installation of the 100kW solar panels at Highline High School would support one of the City's climate goals, which includes transitioning to the use of renewable energy to eliminate fossil fuel use in the community.

We are impressed with the organizing the students have done to plan the project, recruit community support, obtain administrative approvals, raise funding, and more. As young women of color, these student leaders took on a big challenge with grace and persistence and are role models for all of us.

The City of Burien is proud to support Highline Public Schools and the student-led effort to pursue a 100kW solar panel installation on the roof of the new school, not only for its long-term operational savings to an important and tax-payer funded public institution, but also for its contribution to education and awareness about renewable energy opportunities in our local community.

Thank you for your consideration.

Sincerely,

Paige Morris
City of Burien
Environmental Education Specialist



December 16, 2021

Seattle City Light
Attn: Green Up Renewable Energy Certificate Purchase Program

RE: Letter of Support for Highline High School

To the Selection Committee,

Sustainable Burien is a local grassroots non-profit aimed to keep our neighbors talking about sustainability, however it means to them. The students of Highline High School Environmental Club of 2020 proposed their solar project to us. In August of 2020, we agreed to act as the project manager for their campaign.

We are so proud of the organizing students have done to plan the project. They demonstrated outstanding community service capability and a will to serve for the public good. They are insisting on setting an example for all students: empowering them to also take meaningful, impactful, and necessary actions toward climate justice and sustainable development. As young women of color, these student leaders have faced great skepticism and cynicism with grace and persistence. They are determined to work together to bring this solar project online—a legacy project for a sustainable future for all but especially for low-income South King County students of color! The pandemic cannot stop these young talents. No task is too big or too demanding for them. They are a creative problem solver, and an advocate for climate justice for all.

The solar system will be the biggest and the first in all public schools in South King County. The 100kW system (roughly 300 panels) will generate around 105,000 kWh of electricity every year, and they last for 30 years. This system is designed by students for students with ongoing support from the District and teachers at Highline High School. The students are directly engaged with the project managers of the project during the project's planning, funding, and construction. They will also be the ones leading the maintenance and upgrade procedures for the systems for the next 30 years. As we talk about investing in STEM, BIPOC students in low-income communities in the Highline School District have never seen a solar panel before in real life. This is how we walk the walk bringing STEM to the students!

Thank you for your consideration,

Elly - Hien Thu Trinh
Co-leader

Sustainable Burien

Website: sustainableburien.org

Facebook: facebook.com/SustainableBurien

Email: contactus@sustainableburien.org



Burien • Des Moines • Normandy Park • SeaTac • Tukwila

December 15, 2021

Seattle City Light
Attn: Green Up Renewable Energy Credits Program

RE: Letter of Support for Highline High School Environmental Club Solar Project

To the Selection Committee,

Seattle Southside Chamber is dedicated to equitable economic development and community engagement for South King County. We focus on this through programs and initiatives to support education and workforce development, entrepreneurship and advocacy.

We collaborate with Highline Public Schools to support educational, professional and cultural opportunities for local students. We create and support internship and job shadow programs, run a summer workshop called Workforce Discovery Lab and have collaborated with the HHS Environmental Club leaders to support youth leading their community in advocating for renewable energy sources. We did this by helping them with their outreach and engagement.

We are so proud of the organizing the HHS students have done to plan the project, recruit community support, obtain administrative approvals, raise funding and more. As young women of color, these student leaders took on an adult challenge with grace and persistence, and are role models for all of us.

We are proud to support Highline Public Schools and the student-led effort to pursue a 100kW solar panel installation on the roof of the new school, not only for its long term operational savings to an important and tax-payer funded public institution, but also for its contribution to education and awareness about renewable energy opportunities in our local community.

Thank you for your consideration,

Sincerely,

Andrea H. Reay
President/CEO
Southside Chamber



December 16, 2021

Seattle City Light

Attn: Green Up Renewable Energy Credits Program

RE: Letter of Support for Highline High School Environmental Club Solar Project

To the Selection Committee:

As a Highline parent as well as a school board member, I applaud the efforts of the young people leading the charge for solar panels on our new Highline High School. As I listened to their Zoom presentations to the public and to the school board, I was inspired to support their cause.

I am so proud of the organizing that the HHS students have done to plan the project, recruit community support, obtain administrative approvals, raise private donations, seek grants and more. They were unflinching in pursuing their goal, gathering volunteer mentors and community supporters as they went. These young people are the leaders of the future, and they are wise to request we prioritize our first solar panel installation, despite competing priorities for district dollars.

I am proud to support the HHS Environmental Club's student-led effort to pursue a 100kW solar panel installation on the roof of the new school, not only for its long term operational savings to the district, but also for its contribution to education and awareness about renewable energy opportunities in our local community. No one has worked harder to make this project a reality than our students, several of whom are now in college, but they have continued to help promote this project and pass the baton to current HHS students.

I ask that you honor their project with full support from the Seattle City Light renewable energy credits program.

Thank you for your consideration,

Joe Van

Vice President, Board of Directors

Highline Public Schools

joe.van@highlineschools.org



December 20, 2021

Seattle City Light
Attn: Green Up Renewal Energy Credits Program

RE: Letter of Support for Highline High School Environmental Club Solar Project

To the Selection Committee:

The Highline Schools Foundation is an independent, 501(c)3 organization whose sole purpose is to unite community support to ensure innovative and equitable learning across Highline Public Schools and to nurture the potential of every HPS student.

We collaborate with Highline Public Schools to support educational, professional, and cultural opportunities for local students. This effort to secure funding to install a 100kW solar panel on the roof of the new school, by the student-formed--and led--Highline High School Environmental Club, supports students' learning and professional experience as they researched solar panel options and then engaged in fundraising activities, from grassroots efforts and public presentations to the pursuit of grant funding.

We are proud to support Highline Public Schools and the student-led effort to pursue renewal energy sources, namely this 100kW solar panel installation. Not only will this result in long-term operational savings to an important and tax-payer-funded public institution, but it will also contribute to the awareness of, and education about, renewal energy opportunities in our local community.

We hope you will give these students' proposal favorable review and support. Thank you for your consideration.

Sincerely,

Anne Gillingham
Executive Director
E: anne@highlineschoolsfoundation.org
C: 206.245.4572



December 15, 2021

Seattle City Light

Attn: Green Up Renewable Energy Credits Program

RE: Letter of Support for Highline High School Environmental Club Solar Project

To the Selection Committee,

Burien People for Climate Action is dedicated to helping local government develop and implement a comprehensive climate action plan to reach the greenhouse gas reduction targets set by the [King County-Cities Climate Collaboration](#), which include a 50% reduction by 2030.

We are collaborating with a number of local groups working to mitigate Climate change, improve our carbon footprint and make a more sustainable community. One of these groups is the HHS Environmental Club.

We collaborated with the Club leaders to support youth leading their community in advocating for renewable energy sources. We did this by mentoring and support during the initiation and progress of the current solar project.

We are so proud of the organizing the HHS students have done to plan the project, recruit community support, obtain administrative approvals, raise funding and more. As young women of color, these student leaders took on an adult challenge with grace and persistence and are role models for all of us.

We are thrilled to support Highline Public Schools and the student-led effort to pursue a 100kW solar panel installation on the roof of the new school, not only for its long-term operational savings to an important and tax-payer funded public institution, but also for its contribution to education and awareness about renewable energy opportunities in our local community.

Thank you for your consideration,

Burien People for Climate Action (PCA) Steering Committee:

Omaha Sternberg, Co-Chair, 33rddems@gmail.com

Annie Phillips, Co-Chair, annie@soundviewcottage.com

Terry Jorgensen, Secretary, ptjorgens2@comcast.net



December 16, 2021

Seattle City Light

Attn: Green Up Renewable Energy Credits Program

RE: Letter of Support for Highline High School Environmental Club Solar Project

To the Selection Committee,

The Weed Warriors organization is a WA State non-profit charity recognized by the IRS with a 501c3 status. Our environmental community service projects improve the aesthetic, recreational, and economic value of public parks and public education facilities and properties.

We collaborated with the HHS Environmental Club leaders to support youth leading their community in advocating for renewable energy sources. We did this by encouraging their efforts as they raised donations from individuals, hosted an information booth at the local Farmer's Market, and searched for possible grant fund sources.

We are so proud of the organizing the HHS students have done to plan the project, recruit community support, obtain administrative approvals, raise funding and more. As young women of color, these student leaders took on an adult challenge with grace and persistence, and are role models for all of us.

We are proud to support Highline Public Schools and the student-led effort to pursue a 100kW solar panel installation on the roof of the new school, not only for its long term operational savings to an important and tax-payer funded public institution, but also for its contribution to education and awareness about renewable energy opportunities in our local community.

Thank you for your consideration,

Grace Stiller

Grace Stiller, President and Founder

Nature Stewards Program [Weed Warriors, 501c3 Non-Profit Charity](#)

Stewards and Advocates for Living in Harmony with Nature

Office (425) 228.7927; Cell (206) 795.5783



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Washington State Dept. of Commerce
Energy Division

Energy Retrofits for Public Buildings – Solar

Deadline: 8/19/2021

Highline Public Schools Highline High School Environmental Club Solar Project

Jump to: [Application Questions](#) [Budget](#) [Documents](#)

USD\$ 110,100.00 Requested

Submitted: 8/19/2021 1:55:19 PM (Pacific)

Project Contact

Rose Eades

rose.eades@highlineschools.org

Tel: 206-631-3094

Additional Contacts

none entered

Highline Public Schools

15675 Ambaum Blvd SW
Burien, WA 98166
United States

Telephone 206-631-3002

Fax

Web <http://highlineschools.org>

Superintendent

Susan Enfield

susan.enfield@highlineschools.org

Application Questions [top](#)

Some answers will not be presented because they are not part of the selected group of questions based on the answer to #5.

Applicant Information

1. Which type of eligible entity is the applicant?

(Minimum Qualification)

- ☐ Local Government
- ☐ State Agency
- ☒ K-12 Public School District
- ☐ Public Higher Education Institution
- ☐ Federally Recognized Tribal Government

2. Applicant UBI

(Minimum Qualification)

601344184

3. Does the applicant have a Greenhouse Gas Reduction Plan?

(Informational)

- ☐ Yes
- ☒ No

4. Has the applicant received funding for a solar project under this grant program in the past?

(Scored – 10 points available)

☐ Yes

☒ No

Contractor Information

5. Has an installation contractor been selected?

(Informational) You do not need to select an installation contractor prior to application.

☐ Yes

☒ No

6. If an installation contractor has not been selected, how will the contractor be selected?

(Informational - used to evaluate general feasibility)

As a public school district, we follow a competitive bid process for projects over \$100,000, per state and district policy.

7. If an installation contractor has been selected, please enter the company name, contact person, name and email.

-answer not presented because of the answer to #5-

8. Who completed the site assessment and production assessment? Please enter name, company, title, phone and email.

Please upload qualifications in the documents section. (Informational – used to verify the energy production estimates)

Jack Newman, REP, VMA

Director of Clean Energy Solutions

O 206.267.1700D 206.576.7231 | E jnewman@sazan.com

Sazan Environmental Services

600 Stewart Street, Suite 1600, Seattle, WA, 98101

www.sazan.com/ses

9. If the applicant is working with DES, who is the DES project manager?

(Informational)

Not Applicable

Project Information

10. Project Title

(Informational)

Highline High School Environmental Club Solar Energy Project

11. Summary of the Proposed Project

(Informational)

This grant application is submitted by Highline Public Schools on behalf of a special group of students and community mentors. The Highline High School Environmental Club will summarize this project in their own words, as they have done for numerous virtual presentations since August of last year, to community groups, the school board, the city council, elected officials, local businesses, students of all ages in Highline School District and more:

“Our team started the Environmental Club in November 2019. The officers consist of Nha Khuc (President), Selena Nguyen (Vice President), Ruth Assefa (Secretary), and Kim Nguyen (Treasurer). Our goal is to promote sustainable technology and raise awareness of environmental injustice with our club’s resources and platform. The team’s major project since August of 2020 has been planning, promoting and raising money to put a 100kW solar panel installation on the rooftop of the new Highline High School building. This project is in partnership with these organizations based in Washington state: Spark Northwest, Sustainable Burien, and Burien People for Climate Action (Burien PCA), to make this project a reality.

The solar system will be one of the first on public schools in South King County. The 99.9kW system (252 panels) will generate approximately 115,400 kWh of electricity every year. It will cover 14.3% of Highline High School’s annual electricity consumption. Using the Helioscope report’s production estimate of 115,400 kWh in year 1 and a statewide average electricity rate of \$.08275/kWh, simple payback ranges from 38.4 years (excluding degradation, rate escalation, tax credits, depreciation) to 28 years (considering a .5% annual degradation and 3% annual electric escalation).

The proposed system will be net metered onto the school’s primary meter and credited under an interconnection agreement with Seattle City Light.

The project was designed by the District’s electrical engineering contractor Hargis Engineers, with energy modeling produced

by Parametrix Engineers. The Helioscope report was provided by Sazan Environmental Sciences. The District and the HHS Environmental Club will provide the match dollars from capital funds, fundraising, and/or additional grants for the equipment and installation. The District will also provide construction management and project management for the project.

Highline Public Schools is obligated to follow procurement guidelines. To the extent possible, the District will give consideration to design proposals featuring Made In Washington components such as Silfab solar modules assembled in Bellingham, SunModo mounting and racking systems headquartered in Vancouver, and APSsystems inverters with U.S. market headquarters in Seattle.

Researching and raising awareness and funding for this project has proven to be a real-life experience in STEM education and public administration for us. This system is conceived by students for students with ongoing support from the District, community mentors and teachers at Highline High School. We have directly engaged with the project managers and many other community leaders during the project's planning, fundraising and grant writing. As educators talk about investing in STEM, we BIPOC students from low-income communities in the Highline School District are walking the talk. Some of our fellow students have never seen a solar panel before in real life.

We began using GoFundMe as a crowdfunder in the middle of January 2021 and have raised almost \$9,000 in funding from supporters in our community. In late spring, we transferred our donation portal to the Highline Schools Foundation as a project-specific fund for the HHS solar panel project. An overview and link to the donation portal are hosted by Sustainable Burien. The solar project on the roof of our beautiful new high school will be a proud symbol of our community's bright, inclusive future.

We also anticipate selecting a fitting fiscal sponsor for the project in order to receive grant funding from sources that require the project to have a 501(c)3 status. We're prioritizing non-profit organizations in our local area and making an effort to reach out to BIPOC-led organizations, anti-racist organizations, and organizations that serve BIPOC community members.

Our ultimate goal is to give future Highline students access to applied science and sustainable technology, and then help them implement what they learn about solar energy in the classroom. With limited resources, the ability to interact with renewable energy would open more educational opportunities for students within the STEM field and bring awareness of green jobs.

Solar arrays offer a wide range of learning opportunities. Math units can be developed around calculating efficiency and degradation losses, using live production monitoring as a platform for real-life application. Science units can be developed around electrical production and circuitry. Political science units can be developed around the Clean Energy Transformation Act and utility regulations. Social science units can be developed around climate adaptation, messaging and behavior around energy usage. Natural science can study the impacts of mineral extraction, hydro electricity and salmon cycles.

In addition, we are working with mentors at EarthGen to put together a guide for any students to develop and lead similar or larger sustainable projects, like this project of ours."

Note: Despite graduating this spring, many of our Environmental Club project leaders remained involved in the multiple Zoom grant writing meetings this summer to collaborate on this grant application, and continue to be engaged with Sustainable Burien volunteers and district staff in securing additional grant funds and completing the funding package for this project. We hope this project will inspire future students and club leaders to take action and continue to improve our community. By supporting this project, you will be benefiting the students of Highline Public Schools with renewable energy that will impact the educational system long term.

12. Site Address

(Informational - used to verify the energy production estimates; Minimum qualification – must be located in Washington)
225 S 152nd Street, Burien WA 98148

13. Current annual electricity usage of the facility in kWh (may use 2019 data if 2020 data is not representative, or modeled use if building does not have 1 year of data. See RFA Section 3.1 Application Contents for more information).

Usage at the meter(s) where the solar project will be interconnected. Please upload supporting utility bills in the documents section. (Scored – used to calculate payback period; Minimum qualification – used to verify that the project is net metered)
Total kWh per year= 804,827 (HVAC & non-HVAC) based on building simulation report

14. What is the estimated annual production of the proposed system (kWh)?

(Scored – used to calculate payback period; Minimum Qualification – payback period must be less than 50 years)
115,400 kWh/year

15. What is the proposed system capacity in kW AC?

(Scored – used to calculate payback period and cost per watt. Minimum qualification – must be less than 100 kW and greater than 20 kW, or 10 kW for small towns and cities and tribes)

16. Has any structural review been completed? Has a licensed engineer reviewed the project? If so, will any structural upgrades be required?*(Informational – used to assess project feasibility)*

PCS Structural Solutions, a licensed engineer, reviewed the project for the roof structure to accommodate projected loads for a solar array. No structural upgrades required.

17. Will any updates to the electrical system be required? Have you contacted the utility about interconnection? If so, what was their feedback?*(Informational – used to assess project feasibility)*

The proposed system will be net metered onto the school's primary meter and credited under an interconnection agreement with Seattle City Light. Hargis Engineers will contact Seattle City Light to coordinate installing any necessary infrastructure. We do not expect any issues with coordination and completion. We designed the building to be solar ready, other than installing a meter.

18. If the project encounters unforeseen costs, how will you respond? How were contingency budgets determined?*(Informational – used to assess project feasibility)*

Our 5% contingency budget is not part of the grant application or match for this project. Our district Capital Planning & Construction department has decades of experience in overseeing large school bond projects and responding to project challenges.

19. If the system is roof-mounted, what is the age of the building?*(Informational)*

This is a new facility. The Certificate of Occupancy was issued in July 2021.

20. Is this project located in a town or city with a population of 5,000 or less?*(Scored – 10 points available)*

☐ Yes

☒ No

21. Estimated date that project will be under construction contract*(Minimum qualification – must be after awards are announced, expected October 2021)*

June 1, 2022

22. Estimated construction completion date*(Minimum qualification – must be by June 2023 unless an exception is granted)*

October 2022

23. If completion date is later than June 2023, please explain why a longer timeline is needed.*(Informational)*

Not applicable.

24. Please check any components that are Made in Washington*(Scored –10 points available)*

☒ Modules

☐ Inverters

☐ Racking

☐ Other

☐ None

25. Will the project include production monitoring capabilities?*(Minimum qualification)*

☒ Yes

☐ No

Budget [top](#)

Funding Sources	Non-state	State	Total
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Applicant Funds (may include additional grants & donations)	USD\$ 247,900.00	USD\$ 247,900.00
Loans	USD\$ 0.00	USD\$ 0.00
Other Grants or Donations	USD\$ 9,000.00	USD\$ 9,000.00
Other		USD\$ 0.00
This Grant Request (State Funds)	USD\$ 110,100.00	USD\$ 110,100.00
Total	USD\$ 256,900.00	USD\$ 110,100.00
		USD\$ 367,000.00

Project Costs

	Budget
A) Eligible Project Costs	USD\$ 367,000.00
B) Contingency Budget	USD\$ 18,350.00
Total	USD\$ 385,350.00

Match Percent

30.00 %

Budget Narrative

This project idea and this grant application are the result of a student-led initiative of the Highline High School Environmental Club. Student leaders partnered with Sustainable Burien and other local community organizations and volunteer mentors to raise awareness, build deep support and begin fundraising during the 2020-21 school year. The Highline Public Schools board of directors invited students to present their proposed project at the February 23, 2021 board meeting and expressed enthusiastic support.

The students and community supporters have raised more than \$9,000, which is being held by the Highline Schools Foundation for the club and earmarked for the solar installation costs. They plan to continue their fundraising effort to reach a target of \$20,000 by January 1, 2022. There are also a few local private grants they are pursuing that are aligned with the project's objectives, for example: PCC Natural Market Environmental Stewardship Community Grant for \$4,000, and Puget Sound Energy Clean Energy Community Grant of \$10,000 to \$25,000. In addition, the M.J. Murdock Charitable Trust invited the students to send in a letter of inquiry requesting \$233,000 from the Trust.

As a result of the student-led efforts to raise awareness and public support for this solar energy project on Highline High School, this summer, our district Capital Planning & Construction department, as directed by Chief Operations Officer Scott Logan, requested a cost opinion and site layout from Hargis Engineers to support this grant application. Hargis was already providing consulting engineering services on our rebuild of Highline High School.

Hargis provided a cost opinion, taking into consideration escalating construction, prevailing wage and labor costs, and work on the roof of a section of a public school building that is three stories tall, requiring lifts and street closure. As a public school construction project exceeding \$100,000, it will be subject to state requirements for requesting competitive bids and accepting the lowest reasonable and responsive bid. The design in the bid documents will specify Made in Washington modules.

As part of our application process, we consulted with another school district that has a similar project already in process. Tacoma Public Schools is in the design/build phase of a 100kW installation on Hilltop Heritage Middle School (formerly Jason Lee Middle School) on a two-story, flat roof. Their current cost is reported to be \$364,000.

We are committed to supporting additional grant applications and identifying the needed funds to see this project to completion in support of our former student leaders and future students of Highline High School. Out of a senior year spent in a pandemic, our students and community are seizing the opportunity to demonstrate a sustainable energy source that pays for itself over time.

Documents [top](#)

Documents Requested *

Proposals, quotes, or other documentation to support project budget

Required? Attached Documents *



[Project Cost Opinion - Hargis Engineers](#)

Documentation of Energy Production Estimate, either: Onsite shading report AND locational data report and loss assumptions, OR modeling report including shading analysis, loss assumptions, and locational data equivalent to above



[Helioscope Shading Report by Sazan](#)
[PVWatts Report - Secondary Documentation](#)

Qualifications of the person(s) completing energy production estimates	✓	Qualifications - Solar Production - Sazan - Jack Newman
Project scope for all work to be completed under this grant	✓	Project Scope - HHS Solar Project
Site plan showing the proposed layout of modules and other key locations	✓	Site Plan - Solar Design Layout
Site photos (compiled into a single PDF document)	✓	Site Photos - Highline High School Solar Project
Equipment list including modules, inverters, and racking with key data (including place of manufacture if using made-in-Washington components). Must include kW ratings of modules (DC) and inverters (AC) to verify system size.	✓	Equipment List - HHS Solar Project
Utility bill showing most recent year of energy consumption data. See exceptions in the above instructions or the RFA, and upload additional requested information as needed here.	✓	Building Energy Use Simulation Report by Metrix
Certifications and Assurances download template	✓	Certificate & Assurances Form
Diverse Business Inclusion Plan download template	✓	Diverse Business Inclusion Exhibit
Contractor Certification (for Executive Order 18-03 – Worker's Rights) download template	✓	Exhibit C - Contractor Certification

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Application ID: 358732

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electrical cost opinion

Highline High School - 100kW - Photovoltaic Power Generating System
Highline Public Schools

H A R G I S

1201 third avenue, ste 600
seattle, washington 98101
206.448.3376

www.hargis.biz

BASIS OF OPINION	100% Construction Documents	PREPARED BY Jeff Hoover, PE	DATE	July 21, 2021
JOB NUMBER	21-087	CHECKED BY Brendon Inman, PE	OVERHEAD & PROFIT	15%

electrical summary	subtotal	OH&P	total
PV System - Electrical			
Electrical (Division 26)	306,874	46,031	352,905
Subtotal - PV System - Electrical	\$306,874	46,031	\$352,905
Design and Contingency			
Engineering Design Services	17,000	-	17,000
5% Contingency	17,645	-	17,645
Subtotal - Design and Contingency	\$34,645		\$34,645
TOTAL ELECTRICAL COSTS	\$341,519	\$46,031	\$387,550

EXCLUSIONS

- | | | |
|----------------|---|---------|
| 1 - Sales tax | 3 - Electrical Utility Services estimated costs | \$2,500 |
| 2 - Escalation | 4 - General Contractor Overhead & Profit | |

Summary	
Construction Cost	\$ 370,550.00
WSST	\$ 37,425.55
Total	\$ 407,975.55
Design Cost	\$ 17,000.00
Total Project Cost	\$ 424,975.55

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OVERHEAD & PROFIT 15%

description	quantity		material cost		labor cost		engineering opinion		
	number	unit	unit cost	total	unit cost	total	subtotal	OH&P	total
DIVISION 26									
SECTION 260500 GENERAL ELECTRICAL PROVISIONS									
General Provisions (Submittals, Mobilization, Permits)	1	LS	750.00	750	1,500.00	1,500	2,250	337.50	2,588
General Provisions (Cx, Training, O&M, PL & Closeout)									
SECTION 260510 BASIC ELECTRICAL MATERIALS AND METHODS									
Basic Materials and Methods	1	LS	1,500.00	1,500	3,500.00	3,500	5,000	750.00	5,750
(Consumables, Small Tools, Equip Rental, Grounding, Identification, etc.)									
SECTION 260511 ELECTRICAL CONNECTIONS FOR EQUIPMENT									
Electrical Connections For Equipment	3	EA	300.00	900	500.00	1,500	2,400	360.00	2,760
SECTION 260512 ELECTRICAL DEMOLITION									
Small scope rework of existing controlled receptacle cabinert in the main electrical room	1	SF	200.00	200	320.00	320	520	78.00	598
SECTION 260519&33 FEEDER SCHEDULE - COPPER FEEDER IN EMT CONDUIT									
TAG IN FEEDER SCHEDULE									
70N	30	LF	13.00	390	7.50	225	615	92.25	707
200N	30	LF	34.00	1,020	13.63	409	1,429	214.31	1,643

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description	quantity		material cost		labor cost		engineering opinion		
	number	unit	unit cost	total	unit cost	total	subtotal	OH&P	total
SECTION 260519 WIRES AND CABLES - COPPER, 3P, N , G									
70A Feeder Wiring	600	LF	6.60	3,960	3.50	2,100	6,060	909.00	6,969
SECTION 262416 PANELBOARDS									
200A MLO including 24 branch breakers	1	EA	2,000.00	2,000	800.00	800	2,800	420.00	3,220
SECTION 262816 DISCONNECT SWITCHES/ENCLOSED CIRCUIT BREAKERS									
200 Amp - Service Disconnect on Building Exterior	1	EA	500.00	500	300.00	300	800	120.00	920
SECTION 263100 PHOTOVOLTAIC POWER GENERATING SYSTEM									
100kW Photovoltaic	1	LS	220,000	220,000	65,000.00	65,000	285,000	42,750.00	327,750
System Includes									
33kW inverters	3	EA							
PV Panels - 400W	252	EA							
Combiner Boxes and accessories	3	EA							
DC Optimizer & Rapid Shutdown Components	252	EA							
Standing Seam Mounting Clip System (S-5 solutions)	252	EA							
Subtotal Electrical (Division 26)							306,874	46,031	352,905