



2017–18 Renewable Energy Leadership Lab Application

This Online Application is Must Be Submitted by 11:59 pm, Monday, May 8th.

To download a copy of this application, go to solar4Rschools.org/RELL.

Solar 4R Schools empowers educators to integrate the latest renewable energy science and technology into their lesson plans. We provide professional training, teacher-generated lesson plans, interactive science kits and materials, and access to real-time energy data to help bring renewable energy topics to life. <http://www.solar4rschools.org>

Our vision is to bring interactive renewable energy education into every classroom in the nation. As a program of the Bonneville Environmental Foundation (BEF), Solar 4R Schools provides one of the most comprehensive, teacher-tested renewable energy educational programs available nationwide.

With the help of corporate, philanthropic, utility and community partners, our mission is to inspire a new generation of clean energy leaders with the skills and innovative thinking needed to solve the world's biggest energy challenges.

About the Renewable Energy Leadership Lab

Solar 4R Schools, a program administered by the Bonneville Environmental Foundation (BEF), is inviting interested Pacific Northwest K–12 teachers to submit applications to participate in the Renewable Energy Leadership Lab. The Leadership Lab is a year-long professional development and curriculum design opportunity where teachers create innovative, hands-on, inquiry-based renewable energy lessons for the classroom in a peer-supported environment alongside content experts.

The Renewable Energy Leadership Lab is designed to create engaging and relevant renewable energy lessons accessible to teachers in the Pacific Northwest and nationwide. Participating teachers will be part of a small group of educators who collaborate throughout the year to design, test and implement exciting new units of lessons in their classrooms while diving deeper into the science of renewable energy. These “units” are typically multi-day or multi-week investigations of renewable energy concepts that are broken apart into separate lesson plans.

Leadership Lab teachers develop new renewable energy lessons that are heavily anchored in engineering design principles or supplement existing engineering and inquiry projects in their classroom. By the end of the program year, participating teachers will have strengthened their understanding of renewable energy and created exploratory, peer-reviewed classroom-tested lessons that will become part of the Solar 4R Schools online Educator Library.

To support this **curriculum development** portion of this experience, participating teachers will receive:

- Access to and collaboration with renewable energy content specialists
- Supportive in-person discussion of effective pedagogy and unit development strategies with their cohort
- Periodic remote meetings geared toward advancing the development of developing units with peer review and feedback and chances to troubleshoot together along the way
- A \$5,000 stipend to develop and test their lessons (milestone-based, two installments)
- Up to \$500 in materials for summer testing phase
- Up to \$1,000 in materials for implementing their lessons in the classroom
- Up to \$2,000 in materials for testing and implementing up to two additional lessons (@\$1,000 per additional lesson/unit)

Part of the curriculum development and pedagogical discussion involves the positioning of the selected educators as renewable energy STEM/CTE – themed education nationwide. Teachers will investigate methods in which they can share what they gain from this experience for the highest impact on their peers and students at home.

To support the **leadership development** part of this experience, participating teachers will receive:

- Opportunities to present at education conferences and other regional PD events to share the products and takeaways from the Leadership Lab with other teachers in the Pacific Northwest and potentially nationally
- Support for travel and conference fees associated with leadership opportunities
- Supportive in-person discussion of effective means of professional development and guidance in the creation of a leadership plan to map out how to bring this back to their local professional learning communities
- Ongoing remote support throughout and beyond their first year of the program as leadership roles continue to develop within their home districts

Application Process

Important Dates

March 6, 2017 Application becomes available

May 8, 2017 Application closes

May 15, 2017 BEF announces decisions

The Leadership Lab's meetings include a combination of in-person and remote (webinar) sessions. In-person meetings are full-day experiences, taking place at the BEF's office in Portland, OR. Remote meetings are 2-3 hours in length. Each meeting's date, after the kick-off, will be chosen by the group of teachers to accommodate everyone's schedules within the noted date ranges.

In-person Meetings (Required)

- June 21, 2017: Kick-off Meeting
- September/October 2017: Pedagogy Lab
- March/April 2018: Leadership and Pedagogy Lab
- June 2018: Closing Celebration

Remote Meetings (Teachers present their work in two meetings, however attendance for all four is required)

- August/September 2017: Outline Presentation Meeting 1
- October/November 2017: Outline Presentation Meeting 2
- February/March 2018: Lesson Draft Presentation Meeting 1
- April/May 2018: Lesson Draft Presentation Meeting 2

Eligibility

This opportunity is open to all Pacific Northwest K-12 teachers who have the ability to attend the above meetings. Participants are responsible for their arranging and covering their own travel and lodging for in-person group meetings. In the past, teachers have used a portion of their \$5,000 stipend to cover travel expenses to make the in-person meetings. We strongly encourage applicants to secure buy-in from their administration to support leadership development opportunities as they arise in their respective Districts/regions.

NOTE: Are you a Puget Sound teacher that may not be able to take on this meeting structure? Check out our Puget Sound Renewable Leadership Institute (<http://www.solar4rschools.org/leadership>) taking place in July 2017.

Expectations

To complete the Renewable Energy Leadership Lab and receive the full stipend and materials budgets, teachers are expected to:

- Participate in all meetings (8 total: 4 in-person and 4 remote)
- Provide curriculum development materials as new content is developed
- Complete and submit Lesson Outline and present during one of first two remote meetings
- Complete and submit Lesson Draft and present during one of the last two remote meetings
- Complete and submit Final Lesson Plan turned in at the closing in-person meeting
- Complete pedagogical analysis concerning the alignment of their curriculum to Next Generation Science Standards
- Determine methods and complete a leadership plan in which they can share what they've created during this experience to benefit teacher peers and students outside of the program
- Consider and potentially present at conferences and other thought leadership opportunities to share their units and experience to other teachers in the region and nationally

RELL Application

Part I. Personal Information

Name *

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First Name

Last Name

E-mail *

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Phone Number *

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Area Code Phone Number

School District *

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School Address *

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School Name

--

Street Address

--

City

--

State / Province

--

Postal / Zip Code

Please Select	
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Country

Subject Area(s) Taught *

- All
- General Science
- Physical Science
- Life Science
- Biology
- Chemistry
- Physics
- Environmental Science
- Computer Science
- Math
- STEM
- Career Technical Education (CTE)
- Other

Anticipated Student Reach: Over the course of the 2017–2018 school year, please indicate:

Total number of unique individual students you expect to teach with this new unit (total across all classes, clubs, etc.) *

Please enter a single number. If necessary, provide an estimate.

Number of unique classes you expect to teach *

Number of colleagues in your school district that you intend to train/mentor with the resources and materials *

Please enter a single number. If necessary, provide an estimate.

Administrative Support

Please select all that apply

- I am empowered and authorized to take on a leadership role in my district
 - I have notified my administration of my application and how it may impact my school/district community
 - I have support from my administration to act in a leadership for renewable energy education
 - I am working on gaining permission from my administration to implement new lesson plans
-

Administrator Contact Information

Name

Title

i.e. Principal, Science Coach, etc.

Email

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Part II. Applicant Vision

Applicant's Statement

Please state your interest in the Educator Lab and how it fits into your professional goals and goals that you have set for your students. In addition, please include the type of support and/or collaboration you to receive, as well as and what particular skills or expertise that you will bring to the program.

Statement of the Unit Concept

See details below for State of the Unit Concept

Please describe your unit plan concept in this next section, and include the following details:

- a) Overview of the unit itself

- Procedural outline of the unit plan including a time estimate, preferred setting (indoor, outdoor, lab, etc.), student/classroom management, etc.
 - How it meets inquiry and/or engineering design process pedagogy
 - A description of how this unit will promote STEM/CTE, and energy literacy
- b) Targeted grade levels
- c) Specific learning goals for students
- d) Required background information for teachers and students
- e) Statement describing your interest in:
- developing this particular unit and associated lessons
 - collaborating with other teachers
 - sharing it with the Solar 4R Schools teaching community
- f) Any additional information you wish to share to aid in understanding your proposed unit plan and concept

Relevant NGSS and Common Core Standards

Provide an outline of national and relevant state standards that your proposed unit will satisfy. Strong proposals will meet more than one standard, and will show explicit cross-disciplinary linkages. Please be specific when outlining how the standards are met for this lesson/unit, noting specific components of alignment such as Crosscutting Concepts and Scientific and Engineering Practices.

Materials List and Budget

Please provide a list of the materials required, with cost estimates, for the summer Testing Phase (\$500 total) and the Classroom Implementation Phase (\$1,000 total). We understand that you haven't yet tested materials, but would like to understand the scope of your anticipated materials budget.

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Part III. Leadership and Impact

Equity and Inclusion

Solar 4R Schools is devoted to inclusivity in educational efforts aimed at engaging 100% of students in content related to the growing clean energy economy and associated careers. How will your project ensure that the needs of more vulnerable populations of students (e.g. immigrants, communities of color, rural, low-income, and special needs) are taken into account in the implementation of the curriculum? Examples could be strategies to engage English language learners, attention to cultural competence and relevancy, being more gender-inclusive, and inclusion of place-based techniques and linking to local phenomena/examples/resources.

Demonstration of Leadership

Solar 4R Schools believes that the highest impact comes through investing in regional teacher leaders that act as a critical resource for guidance in content and pedagogy for their peers. Provide evidence of your role as a leader in your teaching community. This could include previous delivery of professional development, participation in mentorship programs, conference presentations, data coaching, departmental supervision, or any other examples that demonstrate your capability to leverage this experience for teachers outside of the Leadership Lab.

Ability to Replicate

In what way does your unit allow for replication across different grade levels and access to resources? Imagine that a teacher from another community finds your lesson online and will seek to implement this idea, but will not have been part of the Leadership Lab discussions and wouldn't know your intentions or backstory on the development of this unit/lesson.

Participant Accountability

The success of the Leadership Lab is dependent on the full participation of each of the selected teachers who will collaborate throughout the year. Please include a brief statement assessing your ability to fully participate in the program as outlined and described in this Request for Proposals.

Parts II and III of the application will be considered using the following rubric:

Proposal Component	Percentage
Proposed Unit Plan Content	40%
Alignment to Educational Standards	20%
Equity and Inclusion	15%
Replicability and Leadership Potential	15%
Applicant Commitment and Goals	10%

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