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Clean Energy Future for Public Schools: Benefits and Challenges

February 23, 2024

Agenda

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1. Housekeeping and Introductions
2. An Overview of the Public Schools Category in Illinois Shines
3. Leveraging Energy Savings for Public Schools
4. A Teacher's Perspective on Clean Energy in Schools
5. Q&A

IPA Power Hour Webinars

- **Introduction and Scope**
- **Power Hour is a series of educational and informative presentations on a wide range of clean energy topics and emerging issues**
- **Today's Power Hour:**
  - Provide an overview of the expanded Public Schools Category of the Illinois Shines community solar program.
  - The session will also discuss the various challenges, solutions, and benefits of solar power for schools. Additionally, the webinar will look at how education plays a key role in driving the transition to a clean energy future.

The Illinois Power Agency

Vision:
"A clean, reliable, and cost-effective energy future for residents and businesses across Illinois"

- Independent State Agency created in 2007
- Responsible for the development of an annual Electricity Procurement Plan for customers of electric utilities
- Supports the Illinois Renewable Portfolio Standard (RPS) through the development and implementation of:
  - Long-Term Renewable Resources Procurement Plan
  - Competitive procurement for utility-scale projects
  - Solar incentive programs for homes and businesses

Public Schools Category in Illinois Shines

Presented by Illinois Power Agency

02/23/2024

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Agenda

1. **Category Basics**
   What is the Public Schools category?
2. **How Can Public Schools Participate?**
3. **Updates from P.A. 103-0580**
4. **Barriers & Opportunities**
5. **Where Are We Now?**
6. **Information for Follow Up**

1. Category Basics

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Public Schools Category

The Public Schools Category in the Illinois Shines program creates a carve out for solar development on Illinois public schools.

Prioritizations

To ensure that schools in need are prioritized within the Program, public schools that are Tier 1, Tier 2, or located in an Environmental Justice Community (EJC) are offered priority capacity for the first 180 days of each Program Year. Tier 3 and 4 schools are still offered capacity in the Program, just less capacity than Tier 1 and Tier 2 schools, and schools located in an EJC..

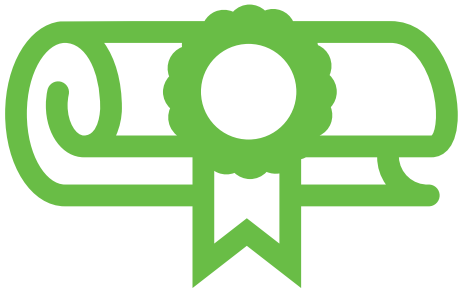
Requirements

Public schools projects must be located on school or district owned land.

For community solar projects participating in the Public Schools category, the school must act as an Anchor Tenant to the project – or subscribe to 10-40% of the project's capacity.

What schools are eligible for this category?

Public schools (K-12)



Public higher education institutions

2. How Can Public Schools Participate?

Public School Project Types

Illinois Shines supports solar energy across two main project types - Distributed Generation or Community Solar.

Distributed Generation (DG)

- A project designed to meet the electric needs of the school or district building.

Community Solar (CS)

- A large solar project designed to meet the electricity needs of many subscribers. This type of project could power not only the school, but also supply electricity to other community members or businesses.
- Customers can subscribe to CS projects within their utility's service area.
- The school or school district at which the project is sited must be a majority (10-40%) subscriber to the project.

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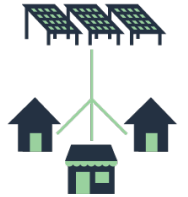
What project type is best?

Distributed Generation vs. Community Solar



Considerations	Distributed Generation (DG)	Community Solar (CS)
Energy use offset	DG projects will only offset the school and/or district facilities electricity use.	In addition to the school, subscriptions to a CS project can offset the energy needs of residential and commercial buildings within or outside the school's community.
Available space	DG projects only address the energy needs of the site where the project is located, making the footprint of these projects much smaller than CS projects, which serve the electricity needs for many subscribers.	CS projects are often larger, accommodating more than one energy-user, and are often ground-mounted. Larger projects are usually sized around 2-5 megawatts, which could require as much as 10-25 acres of land.
Ownership & Financing options	DG projects can be financed in three different ways: outright ownership/purchase, leasing the project, or a Power Purchase Agreement (PPA).	School ownership is possible, though less likely since larger systems have significant upfront capital investments and require active project subscriber management across all 20 years of the REC Contract.
Maintenance	Maintenance responsibilities depend on financing structure and agreement between the project developer and the customer. Usually with a leased system or PPA, maintenance is included.	System upkeep and management is usually performed by the system owner or project developer but depends on the written agreement between the system host and project developer.

Which financing type is right for you?

When deciding on the best option for you, consider:

- If you're **buying** the project, how much will it cost? Will you take out a loan to pay for it? How do the loan payments compare to projected reductions in your monthly electric bill?

- If you're **leasing** the project, how much is your monthly lease payment? How does that compare to projected reductions in your monthly electric bill? Do you have to put money down at the start?

- If you're **signing a PPA** for the project, how much is the per kilowatt-hour price for the energy produced? How does that compare to your current electricity rate? Do you have to put money down at the start?

- Does your **lease or PPA** include an escalation clause that increases the payment amounts over time? If so, by how much do payments increase?

3. Updates from P.A. 103-0580

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Updates from P.A. 103-0580

- On December 8, 2023, Governor Pritzker signed Senate Bill 1699 into law as Public Act 103-0580
- This statute went into immediate effect on December 8, 2023
- Expands the definition of “Public Schools” eligible for the Public Schools category to include Illinois public higher education institutions as defined by the Illinois Board of Higher Education Act
- Also requires projects for this category to be located on public school land

4. Barriers & Opportunities

Barriers to Installing Solar on Schools

REC Contract Terms

The terms of the REC Contract for Illinois Shines are payment for RECs as they are delivered, rather than an upfront payment, which proves to be a barrier for some schools.

Decision Making

Larger facilities decisions for schools often involve many stakeholders and approval processes.

Upfront Capital

Installing solar can be cost prohibitive to some schools, but there are resources outside of Illinois Shines that can help defray these costs.

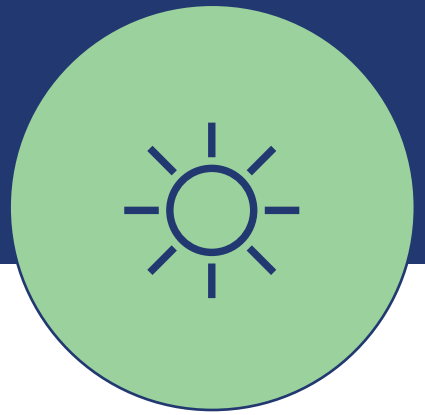
Additional Benefits to Installing Solar on Schools Through Illinois Shines

Savings – Net Metering

Net metering measures extra electricity a solar project produces and sends to the electric grid, and credits you for it on your electric bill.

Learning Resource

Once installed, the solar project can act as a learning resource for students and community members alike.



Savings – Solar Power

With the school utilizing solar power as its primary electricity source, energy costs are reduced.

5. Where Are We Now?

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Schools Projects By the Numbers

Solar projects have been developed on schools in the State through the Illinois Shines program prior to the passage of the Climate and Equitable Jobs Act (CEJA) – which created the Public Schools category.

Uptake in the Public Schools category has been slower since the passage of CEJA, likely due to lack of Program awareness.

	Pre-CEJA (Jan. 2019- Sept. 2021)	Post-CEJA (Sept. 2021-Feb. 2024)
Distributed Generation	~100 projects*	22
Community Solar	0	11

**Assumption based on project names related to schools*

Outreach Activities Planned for Upcoming Program Year

- Presentation to the Illinois State Board of Education
  - Trusted source to share more information
- Continued attendance at various applicable outreach events, including conferences where decision makers meet
- Targeted outreach to needy schools
- Increased information inclusion in relevant newsletters

6. Information for Follow Up

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Have more questions related to Illinois Shines?

General Program Contact Information

Email: **admin@illinoisshines.com**
Phone Number: **(877) 783-1820**
Hours: 9:00 a.m. – 5:00 p.m., M-F

Public Schools Sector Strategist Contact Information

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Leveraging Energy Savings for Public Schools

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CLIMATE JOBS ILLINOIS

We are a coalition of labor organizations advocating for a pro-worker, pro-climate solutions in Illinois. Our affiliates represents hundreds of thousands of working men and women fighting for a clean and equitable future in Illinois.

CLIMATE AND EQUITABLE JOBS ACT (2021)

Builds Illinois' clean energy future | Decarbonizes school buildings | Prioritizes environmental justice | Invests in workforce development

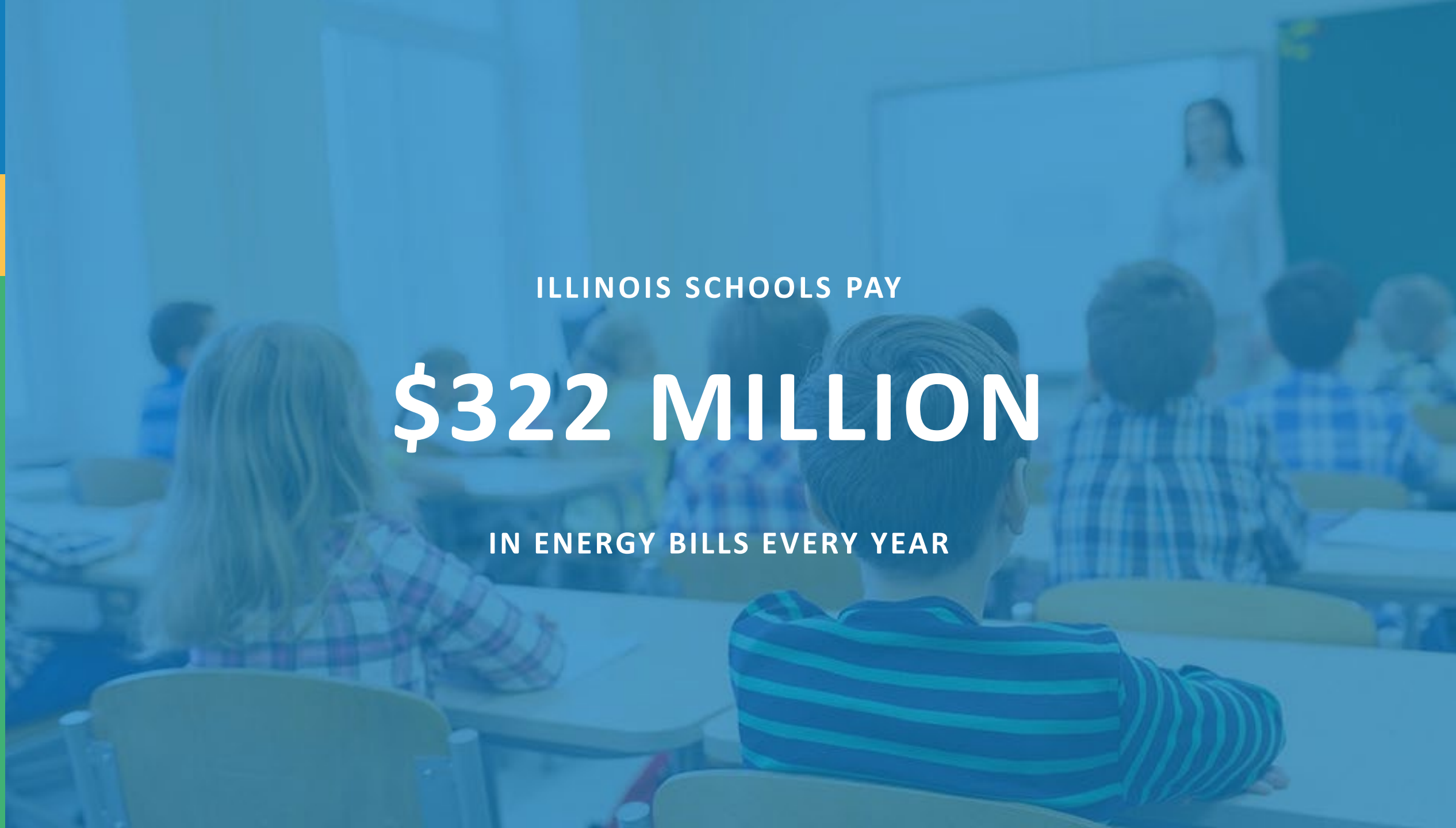
Puts us on the path to be 100% carbon-free by 2050

CARBON FREE HEALTHY SCHOOLS

CJI launched the Carbon Free Healthy Schools campaign in 2022 with support from union members, teachers, parents, and community leaders across Illinois.

We provide no-cost counseling and technical assistance to public school districts on energy efficiency, transportation electrification, and renewable energy solutions.

A cornerstone of this program is helping schools access free energy audits through the Public Schools Carbon Free Assessment (PSCFA) Program established by CEJA.

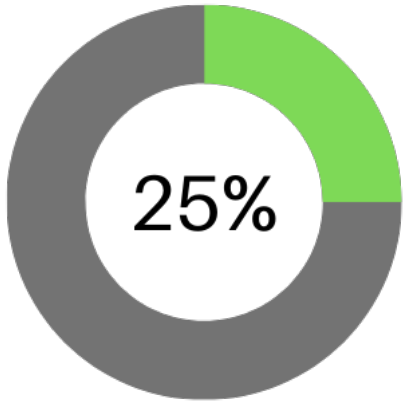


ILLINOIS SCHOOLS PAY

$322 MILLION

IN ENERGY BILLS EVERY YEAR

SCHOOL ENERGY SAVINGS



Energy efficiency upgrades can save schools 25% or more on annual energy costs.

Insulation upgrades can have a simple payback of 1 year or less.

Solar power systems pay for themselves in 10 years or less.

The average district could save $6 million by investing in solar and energy efficiency.

PUBLIC SCHOOLS CARBON FREE ASSESSMENTS

The PSCFA Program ensures a free energy efficiency audit for every public school district that receives electricity from ComEd or Ameren Illinois, **nearly every district in the state.** Audits must include a comprehensive evaluation of:

- Energy efficiency savings opportunities
- Solar energy potential
- School transportation electrification
- Space & water heating electrification
- WELL building certification, and
- Insulation & building envelope

WHAT TO EXPECT DURING THE AUDIT

REGISTER ONLINE

ComEd PSCFA registration portal.

Ameren PSCFA registration portal.

SUBMIT DOCUMENTATION

Submit facilities and usage data, either during registration (Ameren) or soon after (ComEd).

FINAL AUDIT REPORT

Comprehensive summary of energy saving opportunities. Also includes information on grants, rebates, and technical assistance.

INITIAL CONSULTATION

Your utility will reach out to you to schedule your audit and gather data.

ON-SITE EVALUATION

Experienced auditors evaluate every district-owned building, spending about a full day at each location.

NEXT STEPS FOR YOUR DISTRICT

- Meet with ComEd or Ameren's PSCFA team and ask questions.
- Explore grant, rebate, and technical assistance opportunities.
- Schedule a follow-up meeting with CJI.
- Attend CJI's Carbon Free Healthy Schools Webinar on March 19 at 4 PM.
- Check out these federal infrastructure grants for schools.
- Learn more about the U.S. EPA's Clean School Bus Program.
- Get the word out to school leaders about investing in green, healthy schools.


Questions?

RESOURCES

ComEd PSCFA Program Website

Ameren Illinoios PSCFA Program Website

Carbon Free Healthy Schools Campaign Website & Video

March 19 Carbon Free Healthy Schools Webinar Registration

RYAN ZAREMBA

TEACHER PERSPECTIVE – CLEAN ENERGY IN SCHOOLS

How and why did I become invested?

- Earthwatch Institute – Climate Change at the Arctic's Edge
- Why aren't we directly teaching this content and associated skills?
- Why is climate change and sustainability "Just a science thing"?
- Why aren't our school communities modeling sustainable behavior?
- Why aren't we seeing this as an educational opportunity for skill building?
- Why aren't we engaging our students in action? Giving them more agency?
- Why aren't we infusing and enhancing our curriculums in all age levels and disciplines?

Failing our Students and missed opportunities

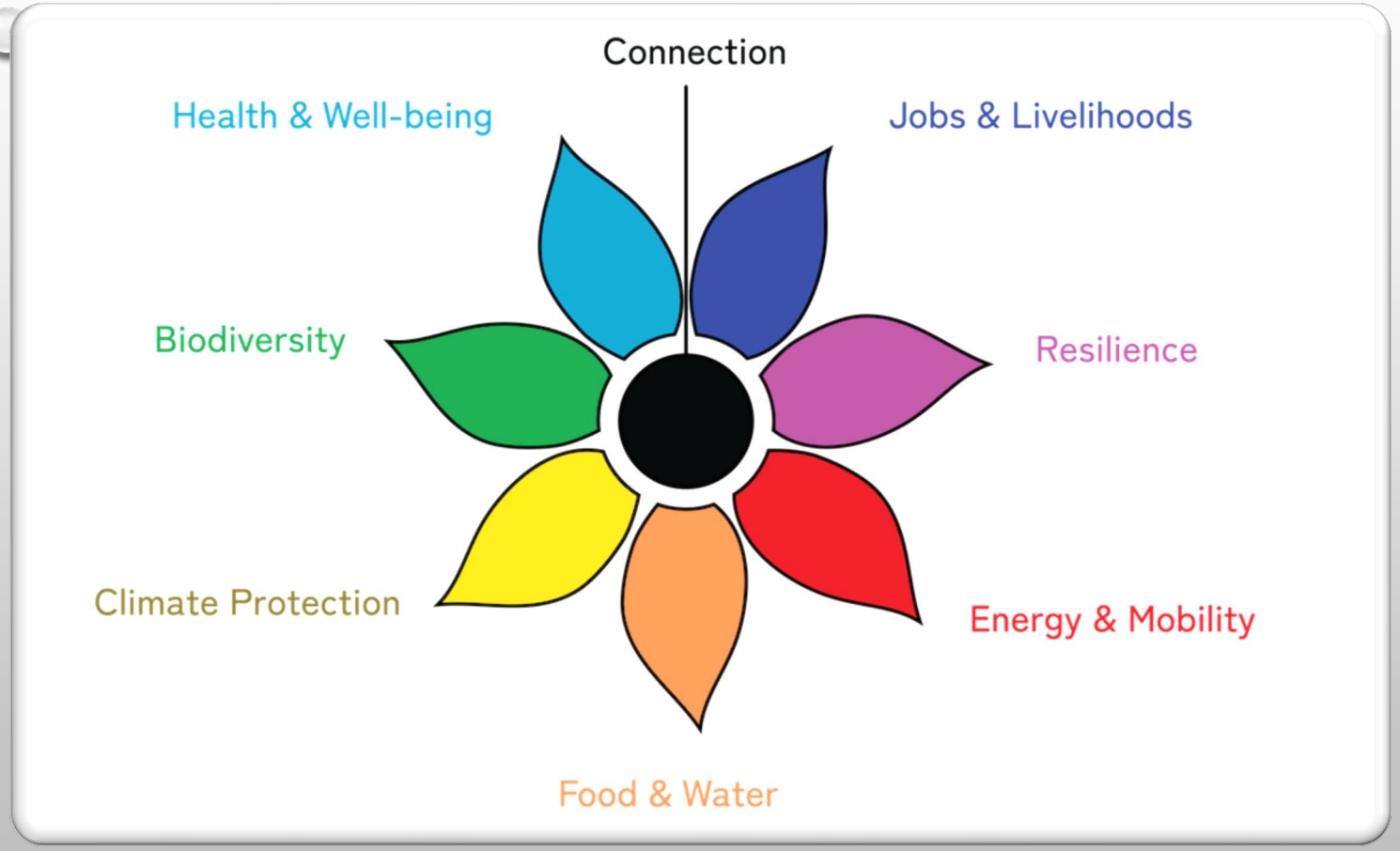
- What does the future hold? What will the job market look like? What skills and content will students need?
- Shift outdated curricula to equip students for the future
- Content is easily accessed today, skills need repeated practice
- Focus on experiential learning. Learning by doing.
- Increased investment in STEM, vocational, and trade education
- NGSS Standard-based, scaffolded skill education starting in the younger grades and building to the older grades

Developing Skills

- Problem-solving Through:
  - Innovation
  - Creativity
  - Time Management
  - Organization
  - Advocacy
  - Cooperation
  - Respect
  - Collaboration
  - Accountability
  - Communication
  - Flexibility
  - Research
  - Deep Understanding
  - Resourcefulness

Clean Energy in Curriculum – A brainstorm

- Students should be given the agency to be part of decisions made in their school communities – transition to clean energy
  - **Science:** What is clean energy? How does it work? Where does it come from? Why are we considering this transition?
  - **Math:** What are the costs? What is our budget? How can we maximize our cost-efficiency? Quantitative analysis of community-wide emissions.
  - **Social Science:** What is the history behind energy usage in the US and worldwide? Who has benefitted most from fossil fuels? How? Why? Who has been forgotten? Why? How? How could we work toward a more sustainable circular Economy?
  - **Art and music:** What are some creative ways to express our feelings about energy use in the world today? How can these pieces be used to move the needle?
  - **English/Language arts:** use of persuasive, evidence-based argument. Expository writing opportunities. Read works of Climate Advocates. Listen to Indigenous Knowledge.
  - **Civic Engagement:** How could we get students to engage with the community? Who could they Partner with? How could they have the biggest impact?
  - **Opportunities** for cross-graded, interdisciplinary work with students. Action projects focused on problem-solving and multisolving.



Multisolving Institute

- Flower model
- Great for evaluating possible changes, solutions, and student action projects
- Ideally cover as many of the flower petals and center as possible
- Powerful visual
- an example of how models can enhance the critical-thinking process

Equity

- Access to resources is currently not equitable
- Low-income schools/districts have less access
- Property-tax based school funding is problematic and enhances inequities
- High-income individuals, schools, districts are generally the most wasteful
- Students with resources are more likely to have the capacity to have action on this issue
- Curricular shifts and changes cost money and require more resources
- Equitable access to quality teacher professional development needs
- How do we provide the resources for each unique community's needs in order to efficiently make change?
- How do we encourage and possibly incentivize underrepresented groups (PoC, women, etc.) to pursue interests in STEM fields?

Individual vs. community-based changes

Student-led grassroots approach to change in a community

Emphasis on how individual changes can help, but community-wide changes have larger impact

Can foster a sense of belonging and purpose in students

Provide pressure on the local educational system to make changes

Student agency

Developing the next generation of community leaders

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Q&A

Contact Us

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