

## **Engaging Stakeholders to Create Healthy and Efficient Schools**

Module 1 in the Energy CLASS Prize "Stakeholder Engagement" Course March 12, 2024





### Welcome

Let's get to know each other!	10 mins		
Lesson Plan	1 hour 20		
<ul> <li>Introduction to Stakeholder Engagement</li> </ul>	mins		
<ul> <li>Stakeholder Identification</li> </ul>			
<ul> <li>Engagement Messaging</li> </ul>			
<ul> <li>Case Study – Portland Public Schools</li> </ul>			
Discussion	30 mins		



## **Course Objective**

Establish a baseline understanding of stakeholder engagement including stakeholder and champion identification, communicating to diverse stakeholder groups, and key message development.

- 1. Participants will understand key messages for communicating the importance of efficient and healthy schools.
- 2. Participants will be able to identify their key stakeholders and those stakeholders' key drivers.
- 3. Participants will learn from practitioners in the field, who are currently or frequently active in stakeholder engagement activities.



## **Today's Presenters**



Shannon Oliver NBI



Ari Ettinger, Portland Public Schools



Ada Rodriguez ICF



### Intros & Icebreaker

#### Please enter into the chat:

- Name
- District
- Location
- Icebreaker: Favorite springtime activity (personal or work-related)



## Introduction to Stakeholder Engagement

# If you want to go fast, go alone. If you want go far, go together.

- African Proverb

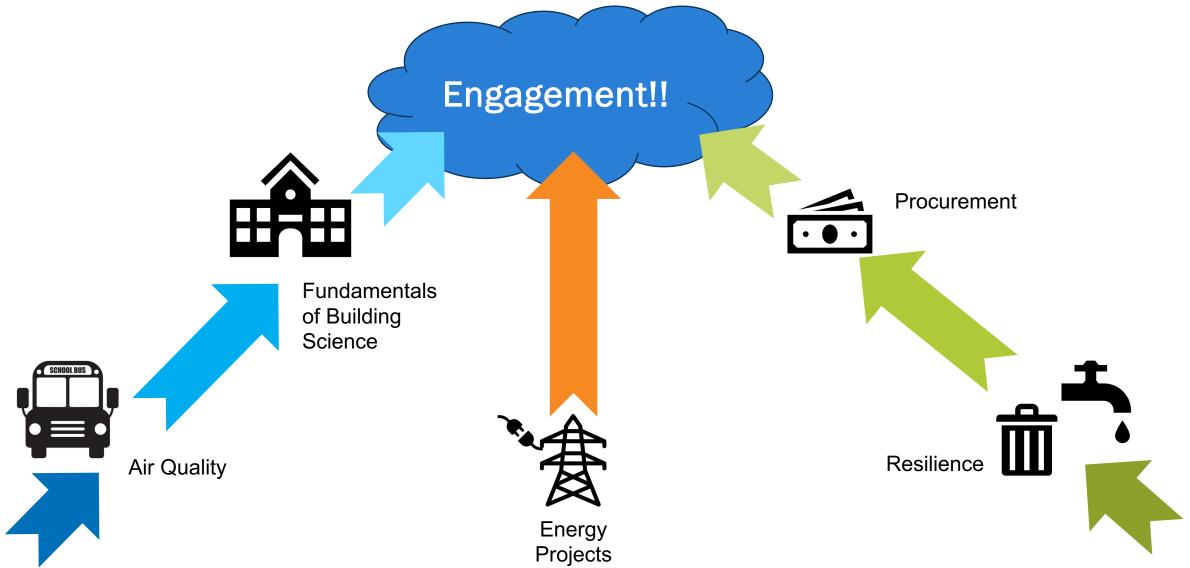


## Why engagement in schools is important

- ✓ Internal stakeholders
- ✓ External stakeholders
- ✓ Educational performance/outcomes
- ✓ Regulatory or statutory requirements
- ✓ Safety & Security
- ✓ Deferred maintenance
- ✓ Staff pay, benefits, and retention



**Connections to Previous Modules** 





## Putting some bounds on stakeholder engagement

#### What it isn't:

- Engaging with the "general public"
- Telling what is already planned or done
- A guarantee of what will be done

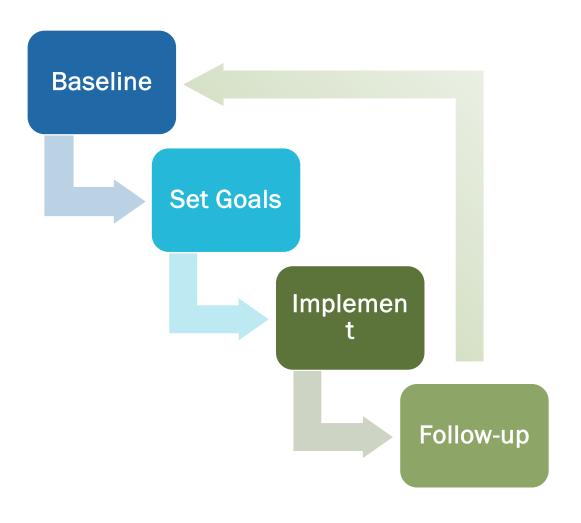
#### What it is:

- A structured project management process
- An opportunity to listen and inform





### **Engagement Process**



#### **Baseline** – Starting Point

Look at what has worked before and the current situation to understand why this matters to everyone involved.

#### Set Goals - Creating a Plan

Decide what you want to achieve through this process, who should be part of it, and how and when to involve them.

#### **Implement** – Putting the Plan into Action

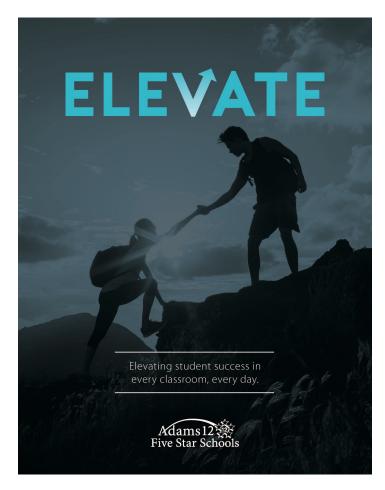
Begin the actual work, with team members guiding the process and keeping track of participation and decisions.

#### Follow-up – Keeping in Touch

Keep everyone informed: explain what you will do, do it, and then share what has been done.



## **Baselining for Engagement**



Source: Strategic Plan - Adams 12 Five Star Schools

- What has your organization already done to engage its stakeholders?
- How has that engagement been managed?
- Any lessons learned from the process (if you were involved) or from your perspective (if you weren't engaged)?
- Can you use any of the outcomes?



## Defining Stakeholder Engagement

#### What does good stakeholder engagement mean to you?

Stakeholder engagement is the basis for building strong, constructive, and responsive relationships that are essential for the successful management of a project's environmental and social impacts.



## Make an engagement plan

- Set engagement goals (not project goals!)
- Define stakeholders and identify champions
- Develop messaging, including defining terms, identifying supporting data, honoring previous work identified during baselining
- Prepare engagement materials, set a schedule, consider how engagement will be delivered (and received!)





## Engage!!

- Professionalism is paramount
- Don't forget the 'Why'!
- Be clear, avoid industry jargon
- Utilize open-ended questions
- Well-written surveys can be useful
- Document your community's input
- Communicate progress and outcomes!



#### **Share successes**

- Storytelling is key
- Use data wisely
- Have your leadership tell the story if possible
- Re-tell the story if more data becomes available

## Iowa City Community School District is among 11 districts across the U.S. recognized for its sustainability

Energy-efficient technologies, careful pest management and education on the environment that starts as early as kindergarden are just a few reasons why the district received this award.



#### <u>Paris Barraza</u> Iowa City Press-Citizen

Published 6:01 a.m. CT May 2, 2023

Source: https://www.presscitizen.com/story/news/education/k-12/2023/05/02/ic-school-districtreceives-green-ribbon-from-u-s-deptof-education/70150999007/



Iowa City West High seniors, Krisha Kapoor and Zoe Scott, despite the cold morning guide a Weber Elementary student on the importance of preparing a garden for winter. Emily Delgado/lowa City Press-Citizen



### **Mentimeter Time**

Other than funding, what are some reasons you've heard "no" on an energy project proposal from your leadership?

https://www.menti.com/ala8nk3q9e1b



# Stakeholder & Champion Identification

BASELINE



## Why bother?

How can communication be effective if words can mean whatever the speaker wants them to mean? If the message is confusing and open to misunderstandings and misinterpretation, because of the wrong choice of words, emphasis, or delivery, how can it be effective?

#### Through the following factors:

- Understanding of the stakeholder community and developing a robust relationship between the project team and its stakeholders.
- Effective information sharing the right information at the right time for people to do their jobs, share opinions, discuss ideas and learn from each other.



### What is a Stakeholder?

"Individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion."

Project Management Institute (PMI®), 1996



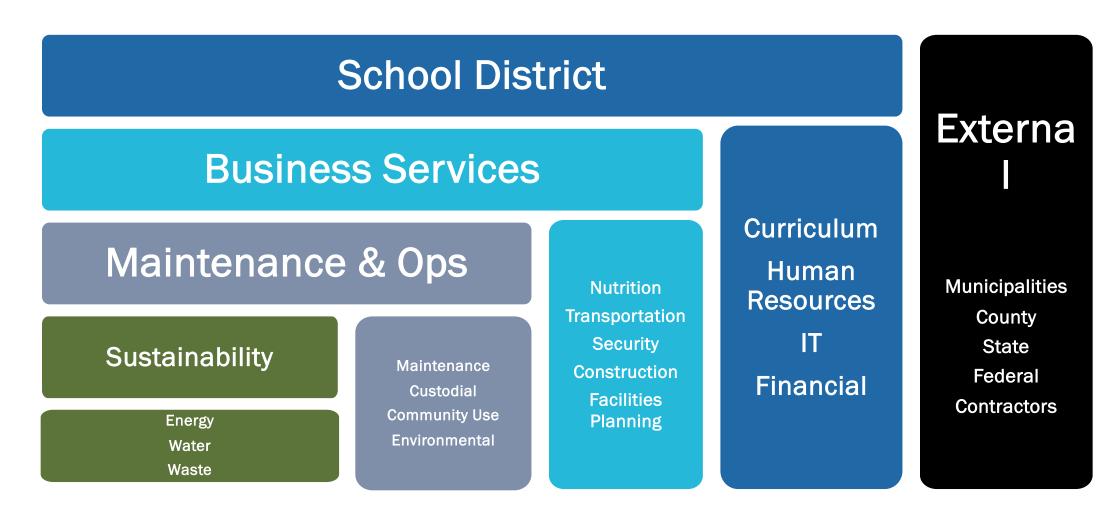
## Who needs to be engaged?

- That depends...
- Funding level and source
- Systems being impacted
- Timing and location of the project
- Are students directly impacted?
- Staff training necessary
- Local/regional code or policy compliance
- Others...





## **Consider Operational Influence First**





## **Affinity Mapping**

Affinity mapping allows for the visual and physical plotting of all stakeholders, it is also a valuable tool to learn about your stakeholders.

#### Brainstorm a stakeholder list! Consider individuals, organizations, and groups

wilhing responsible for implementing by the project		will be held <b>accountable</b> for the project		will be <b>consulted</b> about the project		will be <b>impacted</b> by the project	
PROJECT TEAM	ADMINISTRATION	SCHOOL DISTRICT	IT	TRANSPORTATION	STATE	STUDENTS	
ВОВ	CONTRACTORS	COUNTY	FINANCIAL	HR	MUNICIPALITIES	TEACHERS	
LINDA		CONTRACTORS	SECURITY	FEDERAL	NUTRITION		
				CURRICULUM			

Workbook page 2: Affinity Mapping

#### **Small Group Activity #1: Instructions**



#### Affinity Mapping

- We'll work as a large group.
- Select a decision that we want to discuss, begin brainstorming stakeholders impacted, and group stakeholders according to relevant categories.
- A minimum of 5 stakeholders should be identified.
- Time for activity: 10 minutes

Miro: <a href="https://miro.com/app/board/uXjVNiRdHJQ=/?share\_link\_id=889858483920">https://miro.com/app/board/uXjVNiRdHJQ=/?share\_link\_id=889858483920</a>

## **Understanding Stakeholder Roles**

BASELINE



## Importance of Knowing Your Stakeholders

- View activities from different perspectives
- Have different degrees of understanding
- Need / want different information
- Need information at different levels of complexity
- Have different intensities of interest
- Have different roles in the decision-making process



## What is Interest, Influence?

- INFLUENCE is the ability, empowered by law/mandate or through social hierarchy or access to powerful actors, to shape processes
- INTEREST is willingness/motivation, as institutional mandate or as civic responsibility, to be engaged in the project.



## Interest: Influence two-by-two table

- Most effort and focus should be on Promoters
- Attempt to move latents into promoters and apathetics into defenders
  - Consider time commitment for these efforts vs relative impact to project
- Leverage defenders to help spread the word in their area of the district

#### LATENTS

(high influence, low interest)

Meet their needs via active consultation.

#### **PROMOTERS**

(high influence, high interest)

Most important to manage closely.

#### **APATHETICS**

(low influence, low interest)

Minimal effort needed but **monitor** this group.

#### **DEFENDERS**

(low influence, high interest)

Keep **informed** to maintain their interest.

Interest



## What about those champions?

#### Where to find them:

- Already known
- 1 degree of separation
- Larger outreach

#### How to use them:

- Promoters can garner buy-in and support accountability
- Defenders can spread knowledge and do things

#### **LATENTS**

(high influence, low interest)

Meet their needs via active consultation.

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Minimal effort needed, but monitor this group.

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Most important to manage closely.

#### **DEFENDERS**

(low influence, high intense)

Keep inforr your maintain HINT champions champions

nterest



## Leverage your stakeholders and champions!

Once you've identified stakeholders and champions, use them to share out the key messaging for your project or program!

Name	Contact	Role	Relationship	Resources	Interest: Influence	Affinity	Channel
Janet	####	Project Manager	Will lead project	Time, budget	L:H	Responsible	Project Meeting
Jim	####	Maintenance Mngr	Will own maintenance of installed equipment	Time, staff, budget	L:H	Responsible	Project Meeting
Joseph	####	Lead Electrician	Will install and maintain equipment	Time, expertise	H:L	Responsible	Project Meeting
Jill	####	School Principal	School will receive lighting upgrades	Site access, Time (maybe)	H:H	Accountable	Monthly Report
Judy	####	Security Manager	Improved lighting may impact security imaging	Expertise	L:L	Consulted	Email / Meeting

# Key Messages for Promoting Healthy Buildings



## Getting started on the message

- Use knowledge gained from engagement
- Keep messaging simple
  - Are translation services needed for your community?
- Explore questions:
  - What current work do we want to highlight?
  - Are there regional initiative, priorities, or regulations that will impact this work?
  - Are there existing organizational priorities whose language we can leverage?
  - What do we need to tell vs what do we want to tell?



## Consider focus, complexity, and audience



- What are the goals of the project or program?
- What concerns and questions came up in your engagement efforts?
- Avoid politically charged or contentious language.
- Highlight local or regional success on similar projects.
- Be honest about risks and barriers.

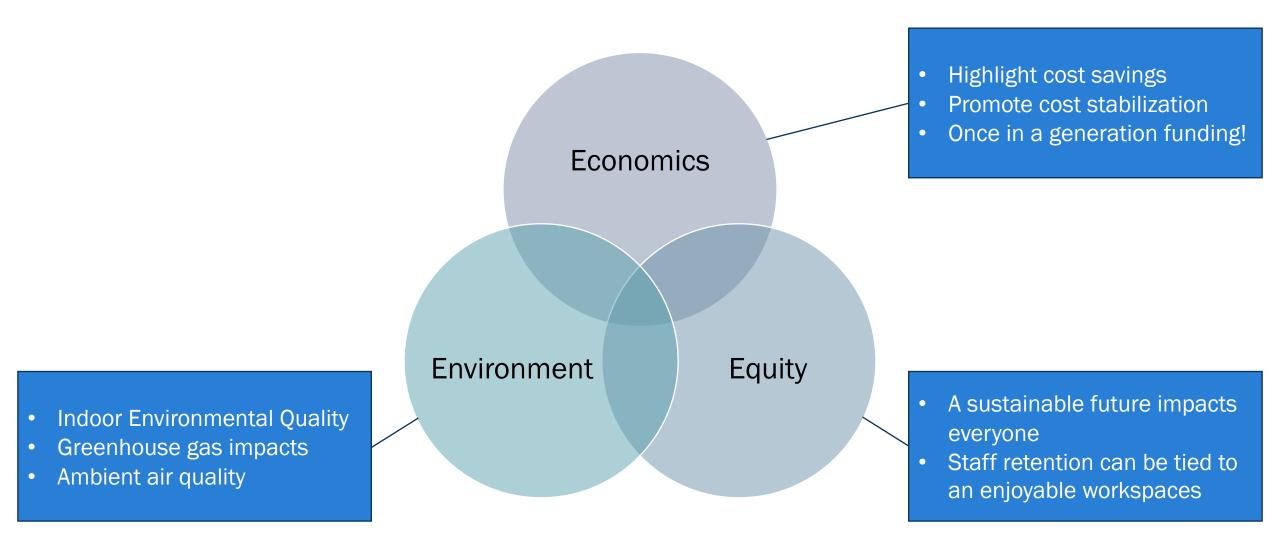
#### **Questions to Consider When Developing Messaging**



Audience Impacted	Key Message	Goal of Communication	Channels		
Answers to these core questions will be used to draft the communication					
What is happening?					
Why is this happening					
Why is this the best decision?					
How was this decision made?					
How will this impact scheduling or timelines?					
How will this impact processes or our current work?					
How do you anticipate employees will receive this news?					
What do you want your audience to feel?					



## Healthy Schools and the Triple Bottom Line





## Six messages for healthy schools

- CLIMATE & ENV: Efficient and healthy schools are low energy buildings coupled with sustainable practices that benefit occupant health. Individual buildings and whole systems can be designed, retrofit, and operated to achieve efficiency and provide healthy learning environments.
- LOWER OPERATING COSTS: K-12 schools spend \$8
   billion on energy, more than is spent on computers and
   textbooks combined. Schools built with high
   performance in mind have lower operating costs and
   over time, save money on energy bills that can be spent
   on educating students. This also reduces exposure of
   school budgets to the volatility of shifting energy
   prices.
- INCREASED STUDENT PERFORMANCE: Occupants of healthy schools benefit from heightened student performance, increased average attendance, better occupant health and improved teacher satisfaction and retention.

- EDUCATIONAL BENEFITS: schools are living laboratories, stimulating learning and innovation. Occupant engagement in schools can provide additional energy savings and serve as a teaching tool for students, STEM programs and the larger community. This greater understanding and deeper knowledge of concepts like science, math, and technology in relation to their surroundings give students the confidence to take leadership roles in their schools as advocates for environmental sustainability and their own learning needs.
- RESILIENCE: healthy and efficient schools are also more resilient in severe weather events. They can create safe havens for the community during emergencies since the building energy generation systems can be islanded and remain functional continuing to provide light and space conditioning during an outage, they also use daylighting and natural ventilation.
- **GETTING TO ZERO**: While zero energy is the end game for building sustainably, it is a process and can take time to accomplish. School districts can start now on this path to zero.



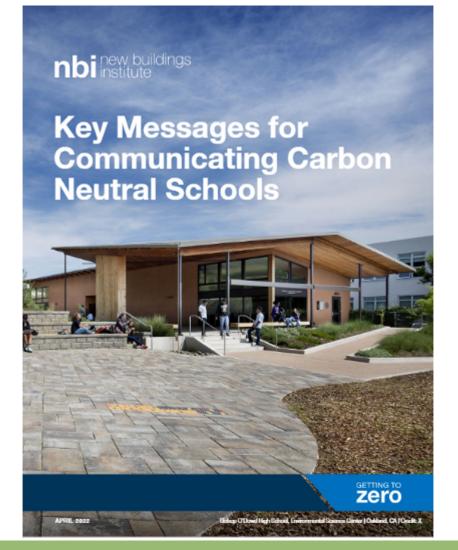
### Don't recreate the science!

#### **Fast Facts About Schools, Energy, and Emissions**

- Public K-12 school buildings represent 7.8 billion square feet of building space, or 85% of all K-12 building space [source].
- 17% of the population in the United States is a student or school staff and spend their day connected to a school (sources [1], [2], [3]).
- America's K-12 schools currently spend \$12.5 billion PER YEAR on energy [source].
- Schools in the United States produce emissions equivalent to 18 coal-fired power plants each year (sources [1], [2]).
- The educational sector consumes over 2,000 trillion BTUs of energy for all types per year, savings across a district could mean hundreds of thousands of dollars that can go back into the classroom or building itself [source].
- With public school square footage equating to 7,837 million SF, and 130,930 public schools in the U.S., the average school is approximately 60,000 square feet. The average school produces about 320 MTCO<sub>2</sub>e of emissions and may spend \$100,000 or more on electricity and gas costs each year.
- According to the 2012 Energy Information Agency's Commercial Building Energy Consumption Survey (CBECS), a typical school uses energy for space heating (35%), cooling (12%), computing and office equipment (9%), ventilation (8%), lighting (9%), water heating (8%), kitchen (7%), and other (10%) loads. [source]

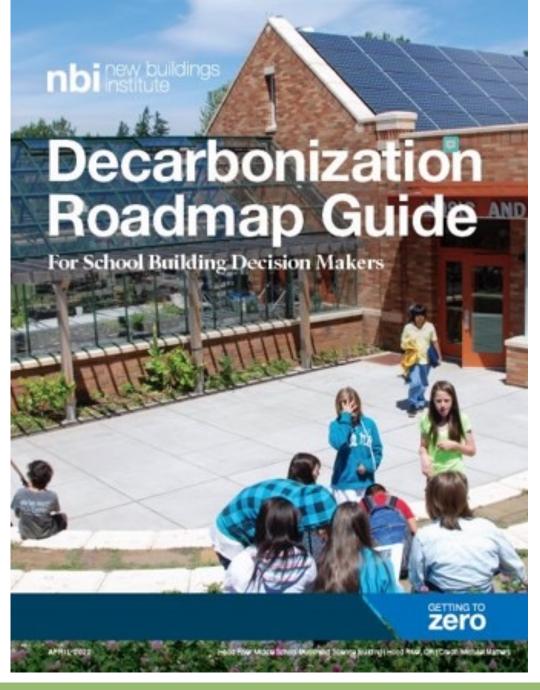
- Educational buildings primarily use gas combustion for space heating, hot water heating and cooking.
- Current emissions associated with the operation of public K-12 buildings is estimated to be approximately 42 MMTCO<sub>2</sub>e [source].
- School buses represent the largest fleet of public transportation with about 480,000, largely diesel, buses in need of electrification [source].

# EDUCATION BUILDING ENERGY USE (2012 CBECS Data) 35% Space heating 12% Cooling 9% Computing 9% Lighting 8% Ventilation 8% Water heating 5% Refrigeration 2% Cooking 2% Office Equipment 10% Other



# Key resource:

- List of districts with carbon neutral resolutions
- Template resolution
- Goals for building lifecycle events
- Technical requirements
- Checklists, work plans & discussion guides





### **Mentimeter Time**

What key messaging tools can you use to promote healthy buildings in you district?

https://www.menti.com/ala8nk3q9e1b





# Key messaging approaches

- Setting energy-based goals and targets
- Addressing costs
- Creating district-level goals or policies
- Promoting or supporting student voice



# How to use energy targets in messaging

- Compare energy use intensity (EUI) targets to energy benchmarking data
- Integrate EUI target into Owners Project Requirements, Requests for Proposals, district policies and contracts
- Report annually on progress toward EUI targets





### Messaging around cost barriers

- US DOE and NREL deep dive into 88 projects in last 15 years
- Goal was to understand the perceived cost barrier
- Key finding was zero energy schools can be designed and built on conventional school budgets



#### Plowing through the Cost Barrier: Zero Energy K-12 Schools for Less

#### Preprint

Paul A. Torcellini,<sup>1</sup> Nathaniel Allen,<sup>2</sup> and Maureen McIntyre<sup>3</sup>

1 National Renewable Energy Laboratory

2 U.S. Department of Energy

3 McIntyre Communications Inc.

Presented at the 2020 ACEEE Summer Study on Energy Efficiency in Buildings August 17-21,2020

Source: <a href="https://www.nrel.gov/docs/fy20osti/77414.pdf">https://www.nrel.gov/docs/fy20osti/77414.pdf</a>



# Adopting formal resolutions, policies and goals

#### **APPROVED**



#### SACRAMENTO CITY UNIFIED SCHOOL DISTRICT BOARD OF EDUCATION

Agenda Item# 9.4

Meeting Date: October 5, 2023

<u>Subject</u>: Approve Resolution No. 3348: Adopting Carbon Neutral Goals and Guidelines for SCUSD Buildings

Information Item Only
Approval on Consent Agenda
Conference (for discussion only)
Conference/First Reading (Action Anticipated:
Conference/Action
Action

**Division:** Facility Support Services

Public Hearing

Recommendation: Approve Resolution No. 3348: Adopting Carbon Neutral Goals and Guidelines for SCUSD buildings.

Background/Rationale: Resolution No. 3348 would adopt the Carbon Neutral Goals and Guidelines for SCUSD Buildings that was presented to the Board at the September 21, 2023 Board Meeting

Sacramento City Unified School District (SCUSD) is embarking on a process to design, construct, and modernize school buildings and facilities to achieve carbon neutrality by 2045, which is set by California Executive Order B-55-18, 2018. As part of the ongoing work outlined by the Facilities Master Plan that was Board approved in October 21, 2021, the District partnered with the New Buildings Institute (NBI) and the Sacramento Municipal Utilities District (SMUD) to develop District guidelines for prioritizing efforts to achieve building portfolio carbon neutrality by 2045, if not sooner. This includes portfolio and project level energy targets and timelines, as well as project requirements for new construction, major modernizations, and facility upgrades. This was a major component of the Facilities Master Plan.

- Climate focused
- Energy focused
- Health focused
- Cost focused
- Student and Staff focused



# Message for student engagement

#### **PROGRAM GOALS**





#### Empowering Students to Take Action

We aim to educate and inspire youth to make a difference in their communities



#### Expanding Work-Based Learning

We strive to help students step outside of the classroom and apply themselves to solve real world problems



#### Saving Money for Schools

We seek to maximize the financial benefits of our programs to improve the bottom line, especially for under-resourced school districts



#### Improving the Environment

We aim to reduce the greenhouse gas emissions from school districts by 80% by 2030.



#### Advancing Environmental Justice

We focus our efforts where our impact is most needed, in California's poorest and unhealthiest communities.

Development of a 10-year Climate Action Plan centered around school communities, including students, teachers, district leadership, local government leaders and business leaders. Our overarching goal is to reduce GHG emissions by 80% by 2030 (compared to a 1990 baseline), equating to ~10% reduction per year.

# Case Study – Portland Public Schools

Ari Ettinger





# District Decarbonization Roadmap

**Aaron Presberg & Ari Ettinger** 

March 8th, 2024

# **District Overview**

44,771 Students 81 Schools

9 million Square Feet

8,200 Employees

# **Climate Justice**

The Policy states:

Climate change disproportionately impacts the vulnerable members of our community. Implementation of this policy will prioritize serving people with disabilities, communities of color, and other vulnerable populations.

#### **Advancing the Graduate Portrait**

- Transformative Racial Equity Leaders
- Influential and Informed Global Stewards
- Optimistic and Future-Oriented Graduates



# PPS Climate Crisis Response, Climate Justice, and Sustainable Practices Policy (CCRP)

#### Passed March 2022

#### PPS Commits to swiftly mobilize resources for climate action to:

- Reducing greenhouse gas (GHG) emissions and minimizing other negative environmental impacts;
- improving our school communities' health and wellness; and
- building a culture of learning, responsibility, and sustainability centered on our values of racial equity and climate justice.
- educate and empower students as leaders in the just transition to a sustainable city and restorative society.

# **Policy Commitment**

#### 10 Goals, 75+ Objectives over Three Policy Pillars:

- Pillar 1: Reduce Environmental Costs and Impacts
- Pillar 2: Improve Health and Wellness
- Pillar 3: Provide Effective Environmental and Sustainability Education

#### **Decarbonization Commitment**

- 2030: 50% Reduction GHG of 2018-2019 baseline
- 2040: Reach Net Zero GHG Emissions
- 2050: Phase out all fossil fuel infrastructure and equipment in new construction and existing buildings

# Why does PPS need a roadmap?

**Is not** a set of design standards

Is not a new policy

Is a defined set of actions that meet the goals of existing policies and standards to zero carbon emissions.

PPS: "It's important that we establish a reliable and transparent system for getting feedback directly from our community about how to make some of those choices."

"This roadmap will help answer the question: in what order should PPS implement GHG emissions reductions measures across schools and admin buildings in order to provide the best chance of meeting PPS emissions goals, given financial, industry, and facility constraints, while considering historic inequities in the distribution of resources across PPS?"

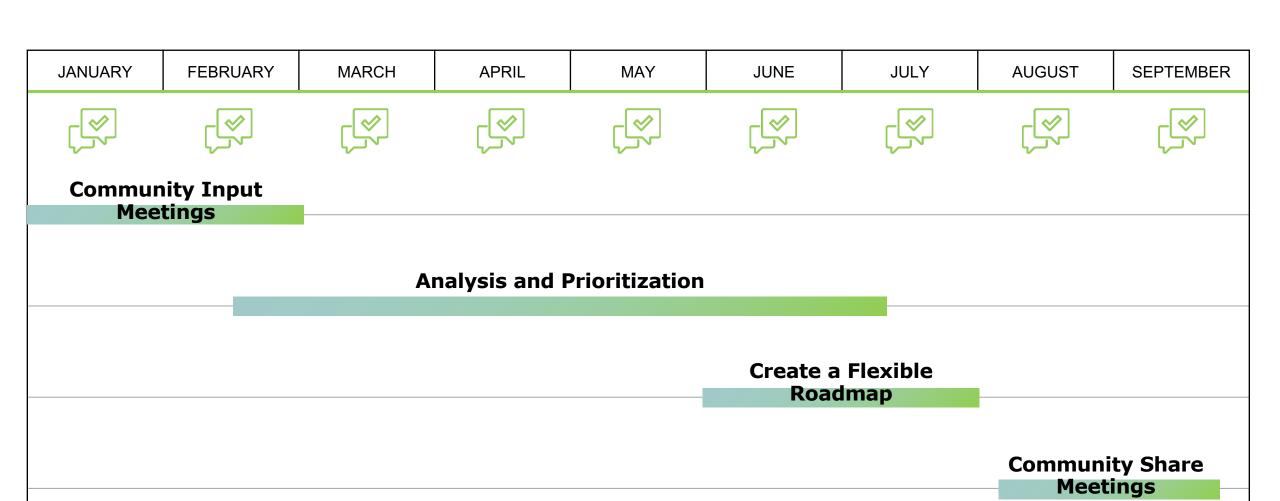
# Justice-Oriented Funding Opportunities

A Future of Solutions on the Ground

- Bond Funding for School Modernizations
- Portland Clean Energy Fund
- Federal IRA, EPA CPRG
- Decarbonization Roadmap



#### **Timeline**



Check in with PPS Office of Sustainability

# **Engaging the Community**

#### Goals:

- Getting the right people in the room
- Asking the right questions
- The community feels involved and informed at the start and throughout the process.
- Collecting input iteratively

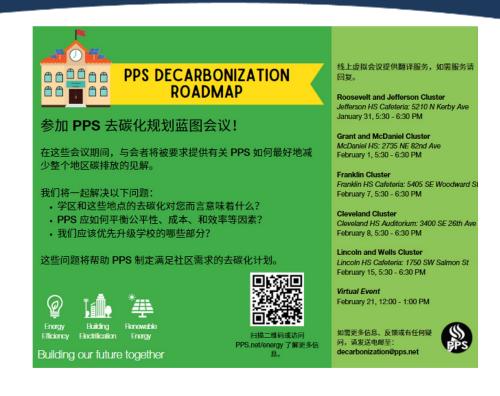


Credit: The Spectrum of Community Engagement to Ownership

# **Engaging the Community**

#### Process:

- Outreach effort
  - Multiple languages
  - Multiple avenues for posting
- Designing the sessions to be inclusive
  - Making space to educate and inform while also holding space for input from experts and novices.
- Virtual, in-person, and online (written) options
- Periodic updates on scope to allow for ongoing input through online survey.



# **Engaging the Community**

#### Challenges:

- Outreach and attendance!
  - Especially in terms of students, teachers, and communities of color.
- Keeping the focus within the scope of decarbonization.
- Understanding how to genuinely utilize the community input in a meaningful way.

#### Lessons learned:

- Take your time.
- Go above and beyond in outreach.
- Be clear about the purposes of the input.
- Build relationships early!
- Be creative with your outreach call directly, show up to classrooms, don't rely on traditional "public input meetings."

#### **Prioritize projects**

#### **Retrofits**





**VFDs** 



RETRO-COMMISSIONING



PIPE INSULATION



LOW FLOW WATER FIXTURES



STEAM TRAP **REPLACEMENTS** 



WEATHERIZATION

#### **Capital Projects**



**DDC UPGRADES** 



**HVAC RETROFITS** OR REPLACEMENTS



**VENTILATION HEAT RECOVERY** 



**ROOF AND WALL** INSULATION



WINDOW **REPLACEMENTS** 



THERMAL STORAGE



ADDED COOLING



**IMPROVED VENTILATION** 

#### CARBON





#### **Electrification Projects**



**CONVERSION OF** NATURAL GAS **HVAC SYSTEMS TO HEAT PUMP BASED SYSTEMS** 



**DHW HEAT PUMPS** 



**CONVERSION OF** NATURAL GAS **COOKING SYSTEMS TO** HIGH PERFORMANCE **ELECTRIC SYSTEMS** 

#### Renewables + Generation



SOLAR PV



**BATTERY ENERGY** STORAGE SYSTEMS



**GRID RESPONSIVE OPERATIONS** 

#### **Create a flexible roadmap**

#### Roadmap | PPS DECARBONIZATION PLAN



FACILITY	GHG EMISSIONS (MT CO <sub>2</sub> e)	FY24	FY25	FY26	FY27	FY28	FY30 MILESTONE	FY50 MILESTONE
BUILDING A	100				CONTROLS UPGRADE AND RETRO CX		REPLACE CONDENSING BOILER WITH HEAT PUMP	
BUILDING B	5 0 0	HP WATER HEATER INSTALL						
BUILDING C	300			REPLACE STEAM BOILER WITH AIR SOURCE HEAT PUMP		REPLACE CONDENSING BOILER WITH HEAT PUMP		
BUILDING D	400		ADD CENTRAL ERV, VRF, REPLACE WINDOWS					
BUILDING E	400							SCHOOL REPLACEMENT
GHG EMISSIONS ANNUAL CHANGE			+ 4 M T	-10MT		-10MT	-10MT	- 7 M T
		- 5 M T			- 2 M T			
GHG EMISSIONS CUMULATIVE	40,674MT						2030 GOAL	
	омт							
HEALTH IMPACT SCORE ANNUAL CHANGE		0%	+15%	+5%	+7%	0%	0%	+15%
HEALTH IMPACT SCORE CUMULATIVE	100%							
	0 %							
EQUITY IMPACT	5							
	0							





### **Questions?**

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Climate Resiliency

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# Discussion



# Putting together a district-level plan

- 1. What topics covered this week changed or was additive to your engagement plans?
- 2. What ways do you see your district leadership directly impacting your engagement efforts?
- 3. What aspects of engagement do you foresee as being the most challenging?
- 4. What topics covered this week do you want to/need to learn more about?



## Next Up in CLASS....

- March 19th 1-3 PM ET: Effective Communication and Storytelling
- March 26th 1-2 PM ET: Stakeholder Engagement Cohort
- May 17th: Phase 2 Submission Deadline



### Questions?

We look forward to working with you!

