SOLAR SCHOOLS

CAMPAIGN TOOLKIT

A guide for advocating for solar on schools

180
GENERATION 180

Generation 180

Generation 180's mission is to inspire and empower everyday people to take action on clean energy through story-driven content, resources, and national and community-level campaigns that facilitate the adoption of clean energy. Learn more at Generation180.org or GoSolarSchools.org. Contact us at solarschools@Generation180.org.

Climate Parents

Climate Parents, a program of Sierra Club, is a diverse national movement of parents and families mobilizing for clean energy and climate solutions. In partnership with Sierra Club's Ready for 100 campaign, Climate Parents is working to move school districts around the country to adopt 100% clean energy. Learn more at ClimateParents.org. Contact us at info@ClimateParents.org.

Acknowledgments

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Empowering Schools to Go Solar

Generation 180 is working toward a future in which all of our schools are completely powered by clean energy. We are igniting a solar schools movement nationwide that will reduce energy costs, enhance learning opportunities, and foster healthier communities. We hope our resources will empower people across the country to be catalysts for solar energy at their schools.

INSPIRING A BRIGHTER FUTURE

Generation 180 partnered with The Solar Foundation and Solar Energy Industries Association (SEIA) to complete a comprehensive study and census of solar schools across America. The report, *Brighter Future: A Study on Solar in U.S. Schools* (November 2017), includes:

- Top reasons why schools are going solar and key challenges for increased adoption
- Analysis of nationwide trends and state rankings for solar installations on schools
- Success stories of schools and districts that are stabilizing budgets, reducing energy costs, empowering students, and enhancing learning through solar
- A how-to guide outlining six steps for schools going solar.

LEARN MORE

download the report and how-to guide at GoSolarSchools.org.

MAPPING THE SOLAR SCHOOLS MOVEMENT

Generation 180 and SEIA have mapped over 5,500 schools nationwide that are tapping into the power of the sun. Use our map to find national and state-specific solar resources and to identify schools near you that have already flipped the switch to solar. Access details about each solar school on the map, including the system installer, system size, and funding mechanism.

GET ON THE MAP

visit GoSolarSchools.org and fill out the form to get your solar school added to our nationwide map.

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INTRODUCTION

Middle schooler Claire Vlases led the charge and raised the funds to get solar panels at her school in Bozeman, MT. Learn more about her success story at GoSolarSchools.org.

YOU HAVE THE POWER to help your schools make the switch to clean energy. You don't need to be an energy expert.

Students, parents, teachers, and community members can lead the charge. All you need is passion and dedication to make a difference in your community. We created this toolkit to empower you to be a champion for solar at your schools. The toolkit lays out a model for organizing a solar schools campaign, but each campaign is unique and may not follow exactly the path outlined here. Feel free to skip around and pull out sections or tools that are the most useful to your effort.

Whether you are interested in installing a small solar system on one school or have plans for district-wide solar power, you will need buy-in from your school and district-level leadership. You can spark the interest of decision makers, encourage them to make clean energy a priority, and gather community support for the project. This toolkit will help you amplify your voice to reach decision makers and organize your efforts to help your schools go solar.

We have put intentional emphasis in this toolkit on the role that anyone in the school community can play, to build support and get school decision makers to agree to make the switch to solar. Your role may evolve once your school or district decides to go solar and begins the planning and implementation phase for the solar project. Additional resources are available at GoSolarSchools.org that will help you with the more technical and financial questions that you may have.

We hope this toolkit empowers you to
be the spark for change in your school community.

NOW IS THE TIME FOR SCHOOLS TO GO SOLAR

AS SCHOOLS ACROSS the country look to enhance learning, optimize financial resources, and protect the health of our children, it is clear that solar energy is a solution that can help lead the way to a cleaner and brighter future. Switching to solar energy benefits schools, families, and communities!

WHY NOW?

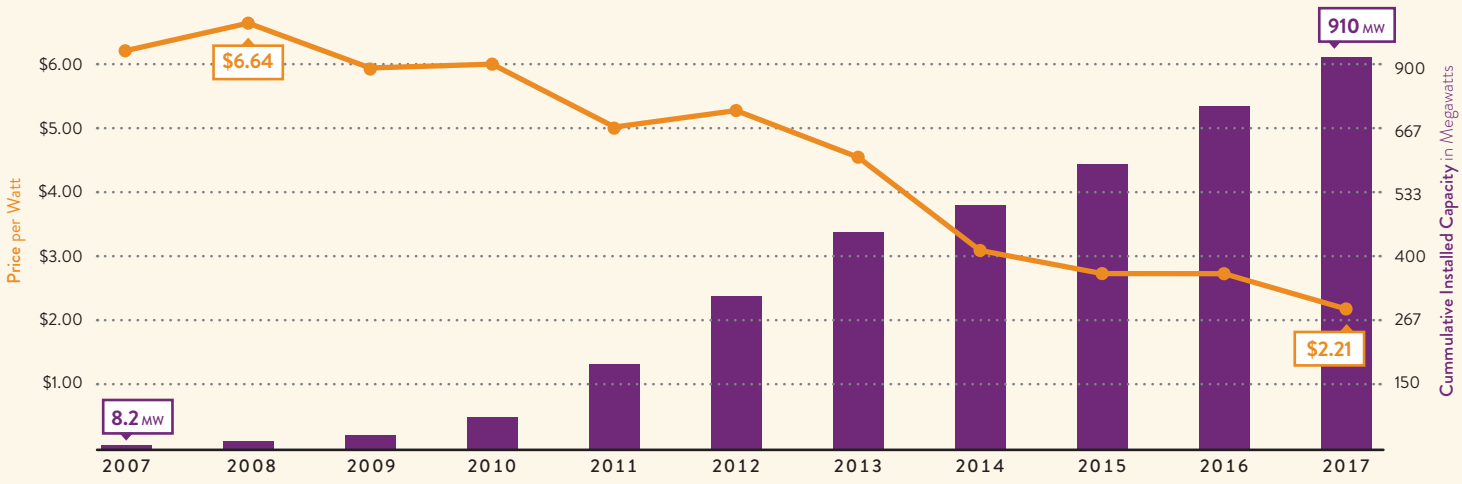
The cost of solar panels is one-third of what it was just 10 years ago,[1] and solar power is now the fastest growing source of new energy globally.[2] Driven largely by the drastically falling costs for solar power, the number of U.S. schools that have invested in solar has grown by approximately 50% since 2014.[3]

FALLING COSTS

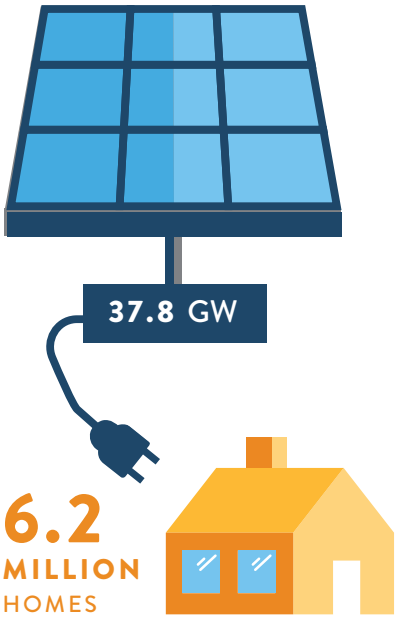
The average solar school installation price has dropped by **66%** during the past decade.

INCREASED SOLAR CAPACITY

The cumulative installed solar capacity at schools has increased more than a hundredfold (**109X**) during the past decade.



Source: Solar Energy Industries Association, database used for the report *Brighter Future: A Study on Solar in U.S. Schools* (Washington, DC: 2017).



If every school in the country installed an average-sized school solar system, they would generate enough clean energy (37.8 GW) to power 6.2 million homes.

WHY SCHOOLS?

Nationwide, schools are spending $8 billion a year on energy costs, the second largest expense after personnel.[4] There is now a tremendous opportunity for schools to save money and reinvest in students by switching to clean energy.

The energy used by K-12 schools in the U.S. is responsible for as much carbon dioxide emissions as 18 coal-fired power plants.[5] Children are especially vulnerable to the health effects of air pollution. By transitioning to solar, schools can do their part to reduce harmful pollution and protect the health and well-being of their students.

WHAT IS THE OPPORTUNITY?

The cumulative installed solar capacity at U.S. K-12 schools has grown more than a hundredfold (109X) during the past decade.[6] Today, more than 5,500 schools nationwide are harnessing the power of the sun.[7] Yet despite this tremendous growth, only 5% of schools are taking advantage of the benefits of solar energy.[8] If every school in the country installed an average-sized school solar system, they would generate enough clean energy (37.8 gigawatts (GW)) to power 6.2 million homes.[9] There is incredible potential to transform how we power our schools.

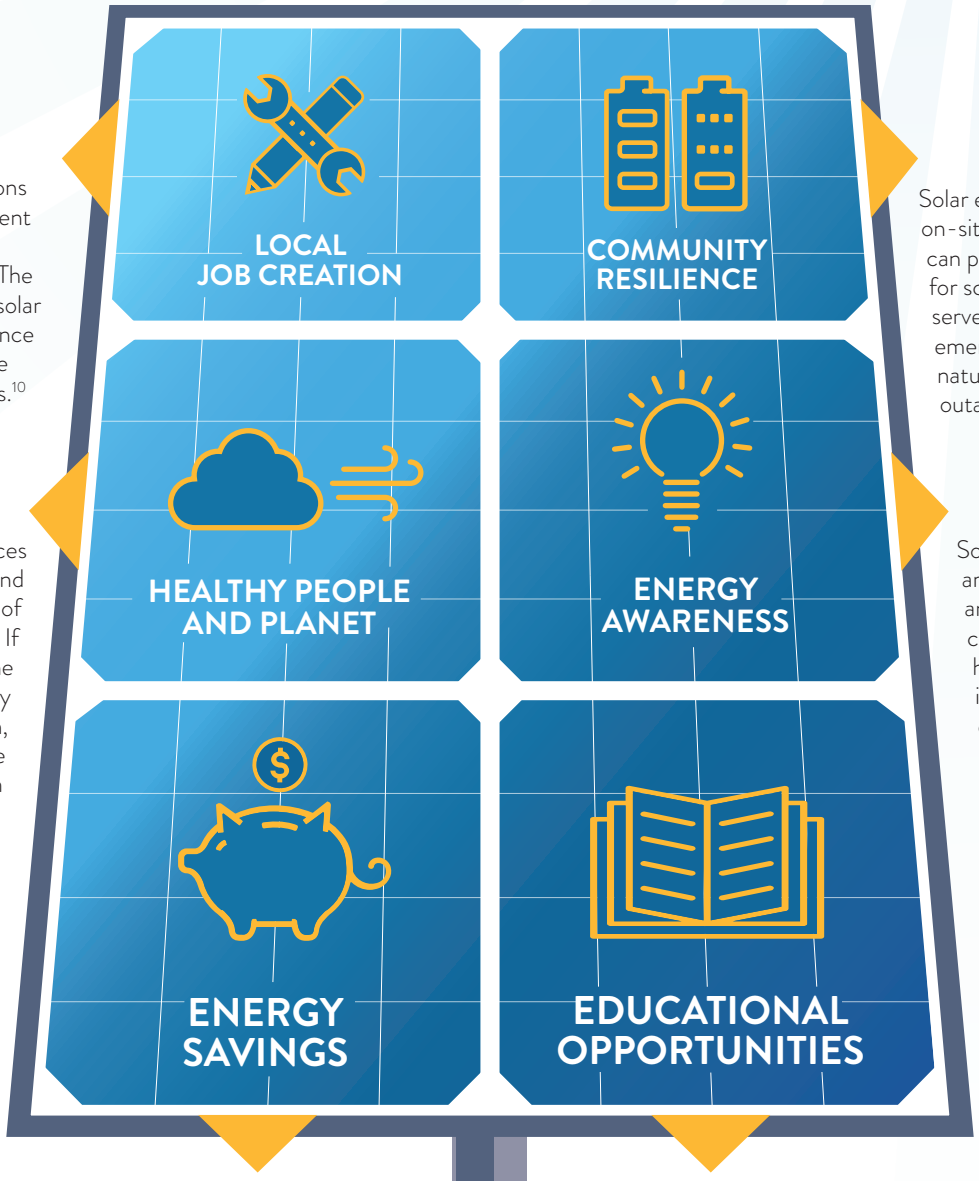
WHAT CAN YOU DO?

Powering schools with clean energy will have a positive ripple effect across the community. Access to solar technology enhances real-world learning opportunities for students. The visibility of solar on schools also demonstrates the viability and affordability of clean energy solutions to local homeowners and businesses. Schools can be the catalysts for change to help drive us toward a cleaner, healthier future.

You have the power to help your schools make the switch to clean energy. You don't need to be an energy expert. Students, parents, teachers, and community members can lead the charge. All you need is passion and dedication to make a difference in your community. We created this toolkit to empower you to be a champion for solar at your schools.

Be the spark for change.

Benefits of Solar Schools



On-site solar installations support local employment and create vocational training opportunities. The number of nationwide solar jobs has grown 168% since 2010 and is now double the number of coal jobs.[10]

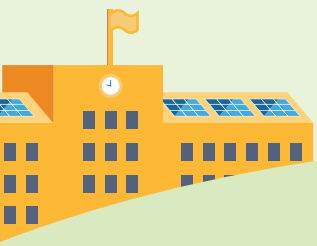
Switching to solar reduces fossil fuel pollution and protects the health of people and the planet. If all K-12 schools in the U.S. were completely powered by the sun, it would eliminate the carbon dioxide pollution equal to shutting down 18 coal-fired power plants.[11] Cleaner air would reduce the 13 million school absences per year caused by childhood asthma.[12]

Solar energy systems with on-site battery energy storage can provide backup power for schools, which commonly serve their communities as emergency shelters after natural disasters or power outages.

Solar schools are models for students and their families to make clean energy choices at home. Solar installations increase the likelihood of further solar adoption in the same neighborhood.[13]

At $8 billion a year, energy is the second largest expense for U.S. schools.[14] Schools can reduce and stabilize energy costs by switching to solar. Those savings can be reinvested back into student learning and enrichment.

Student-led solar campaigns develop leadership skills and build civic engagement. Access to solar technology provides real-world learning opportunities in the STEM fields of science, technology, engineering, and math.



SOLAR SCHOOLS

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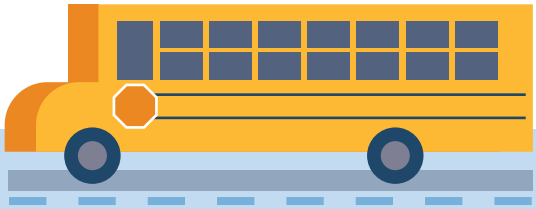
4 Support the Completion of the Solar Project

Maintain communications and ensure follow-through on project plan and timeline



FOLLOW THESE STEPS TO GET

Solar on Your Schools

1

START A SOLAR SCHOOLS CAMPAIGN

STEP 1:

Recruit a core team

Advocating for schools to make the switch to solar energy is a team effort. Once you have decided to be a champion for solar for your school, you can build a team to help meet your goal. A strong core team should have at least four people who share your passion and dedication for getting solar on your schools.

Leverage school and community networks

School networks: Reach out to any friends, parents, teachers, students, or others in your school community who may want to get involved. Ask those people to help you identify others who may be interested.

Parent Teacher Associations (PTAs): Look for leaders within your school community, such as PTA members, student club sponsors, sports team coaches, or scout troop leaders.

Community groups: Identify like-minded local groups, such as clean energy companies, environmental organizations, grassroots organizers, community service groups, faith communities, and municipal leaders.

BRIGHT IDEA
for team recruitment

Try to seek out a team member who has contacts in the solar industry or who understands the local energy landscape.

Seek a diversity of skills and perspectives

Skills: Keep in mind the variety of skills needed for success. Try to include people who are adept at planning and organizing and also those who enjoy outreach and recruiting supporters.

Perspectives: Engage a cross-section of different stakeholders and aim to have students, parents, teachers, school staff, and community members on your team. Having diversity on your team will bring different perspectives and promote inclusion throughout the community.

Knowledge: Since the solar energy landscape varies greatly across the country depending on state policies, utility regulations, and available financing options, it can be extremely valuable to have someone on your team who has solar industry contacts or who already has some familiarity with local energy policy.

BRIGHT IDEAS
for group meetings

Consider ways to liven up meetings and keep it fun.

Holding meetings at someone's home or at a local coffee shop may create a more relaxed atmosphere. Having snacks always helps to break the ice and boost energy.

If you're involving students in your core team, you may want to meet at a school to make it most convenient for students and parents.

STEP 2:

Connect and collaborate with your team

Once you have recruited people who are interested in collaborating to get solar on your school, convene your group to coordinate how your team will work together toward your goal.

Hold a team kick-off meeting

Connect with each other: Allow each person to introduce themself and their connection to the school community or to the mission of going solar. Try to build in time to get to know each other. The connections you make in this group may be the most memorable part of your experience. Make sure to collect and share the contact information of meeting attendees.

Share motivations: Talk about what motivates you to be a part of a solar schools campaign. Distribute the BENEFITS OF SOLAR SCHOOLS tool to spark dialogue about which benefits are most meaningful to you and which ones may resonate most with your community and school leaders.

Generation 180 engaged volunteers in New York City to get involved in helping local schools switch to clean energy.

Share goals: Begin the discussion on your goals and vision for the campaign and encourage others to share theirs. You will continue to refine your vision and come to agreement on your campaign goal in future meetings.

Set up next meetings: Decide on an ongoing meeting location that is convenient for the most team members. Seek consensus on how often your team wants to meet in person (biweekly, monthly, etc.) and the best dates and times for those meetings.

Invite a friend: To continue building the team and momentum for the campaign, assign each person to invite someone new to the next meeting.

Plan how your team will work together

During your kick-off meeting or first couple of team meetings, your group will need to coordinate on how you will be organized and work together effectively. Go to the Organizing and Group Management sections in ADDITIONAL RESOURCES to find more information on effectively leading groups and meetings.

Team leaders: Identify the people who will be the leaders of your campaign. These people will typically devote the most time to the effort and should have a big-picture view of the plan and activities being conducted to reach your goal.

Team roles: It is beneficial for everyone on the team to have clear roles and responsibilities. Survey your group on what skills and resources they are interested in contributing. Roles may include research, outreach and recruitment, communications and social media, fundraising, liaising with school district leaders, and engagement with students.

Students from various high schools in Fairfax, VA meet to coordinate their district-wide "Solar on the Schools" campaign.

Decision making: It can be helpful to discuss how decisions will be made in this team. Will decisions be made by the leaders, voted on by majority, or reached by consensus? Clarity on this will help members feel empowered to act and avoid future frustration.

Meeting coordination: Pick two people who can take turns organizing the team meetings. This role can be filled by the team leaders or by other team members. Tasks include planning meeting agendas, sending meeting reminders, and being responsible for other meeting logistics (room availability, snacks, handouts, etc.). It is helpful to have someone at each meeting take notes and share them afterward.

Team communication: Discuss how you want to stay connected between meetings (such as email, phone calls, text, or an online communication platform). The core team driving the campaign should be in contact regularly to keep things moving forward.

STEP 3:

Get informed about solar opportunities

With your team motivated and organized, you can begin to learn about clean energy opportunities in your community and region. There are a lot of resources and experts to help.

Build your knowledge about solar in your area

Visit GoSolarSchools.org to download our *Brighter Future* study to find recent trends in the solar schools movement, success stories, a step-by-step guide for schools going solar, and the interactive map of nationwide solar schools. On the website, you can search the Resource Library to find a list of educational, financial, and technical resources available nationally or in individual states.

Reach out to local experts: Try contacting a local solar installer who works with commercial and industrial customers to gather general information about potential opportunities and challenges for installing solar on schools in your area. These solar experts can also help answer questions you have about solar technology, explain general financing options, and share experiences with similar projects. Explore the membership directory of the Solar Energy Industries Association (SEIA.org) to find a list of installers in your state.

Build your knowledge about solar in your area: Get a basic understanding of how solar-friendly the policies are in your state. Go to the Solar Policies section in ADDITIONAL RESOURCES to find links with useful information. Research whether your city or state has set clean energy or greenhouse gas emissions goals to which your solar schools campaign can contribute.

LEARN MORE AT GOSOLARSCHOOLS.ORG

Download the *How-to Guide for Schools* that details the six steps for going solar.

Explore the solar schools map to find resources in your state and to learn which neighboring schools have gone solar.

Meet with a school district energy manager

Once you feel informed about solar energy, you can schedule a meeting with school or district staff members who are responsible for facilities and/or energy management.

Energy management is often the role of the facilities managers. If your district has a dedicated position focused on sustainability or energy, this person should be your first point of contact as a potential supporter. Try searching the school or

district staff listing online to find the appropriate contacts. We suggest looking for the district position that directs or manages energy, sustainability, facilities, or operations.

use the
GUIDE FOR MEETING WITH A SCHOOL DISTRICT ENERGY MANAGER
for meeting tips and a comprehensive list of questions to ask.

These professionals have the specific information you need to learn about your school district's energy profile, existing clean energy initiatives, and the potential opportunities for future solar installations on the schools. This knowledge will help guide your decision in setting a goal for your solar campaign and provide insight into how your suggestion for solar may be received.

Some topics for the meeting could include:

- The school's or district's current energy consumption, costs, and energy mix, and existing clean energy installations
- Existing plans for future clean energy initiatives
- Potential barriers to future solar installations and what is needed to overcome them
- Potential spaces for solar installations on building rooftops, parking lots, or other school or district properties
- Advice on setting solar goals for the campaign and insight on how to approach the campaign.

HOW DO SCHOOLS AFFORD TO GO SOLAR?

Power purchase agreements (PPAs) have grown to become a primary financing method in school solar adoption, representing nearly 90% of all installed school solar systems since 2014.[15] This form of third-party ownership enables schools to install solar systems with little-to-no upfront investment or ongoing maintenance costs.

Through a typical PPA, the school district agrees to purchase the electricity produced by the solar installation for 10–25 years at a lower electricity rate and will see cost savings from day one.

visit
DSIREusa.org
Search the Database of State Incentives for Renewables & Efficiency to find out if your state allows third-party ownership.

visit
GoSolarSchools.org
Check out the resource library to find model PPAs and to learn about other financing options.

Kern High School District in Bakersfield, CA.
Credit: Sage Renewables

STEP 4:

Set a goal for your solar campaign

Once you have gathered information about the opportunities for solar in your area and met with relevant school district officials, then your team should be equipped to determine your solar campaign goals. You will want to develop a clear goal that can be shared with community members who will support your campaign and the ultimate decision makers.

In deciding on a campaign goal, your core team may need to consider a range of factors, including:

- Availability of viable roof space or school property for solar installations
- Solar incentives and financing options available in your region
- School or district experience with energy efficiency or clean energy initiatives
- Models of other successful campaigns that could be replicated in your community
- Local context, political climate, and community support for clean energy.

WHAT IS A WATT?

A watt (W) is a unit of power used to quantify the rate of energy transfer.

320 W = *power output rating for an average solar panel*

5,000 W = 5 kilowatts (kW) = *average size of a residential solar system*

300,000 W = 300 kW = *average size of a school solar system*

1,000,000 W = 1 megawatt (MW) = *minimum size of a utility-scale solar system*

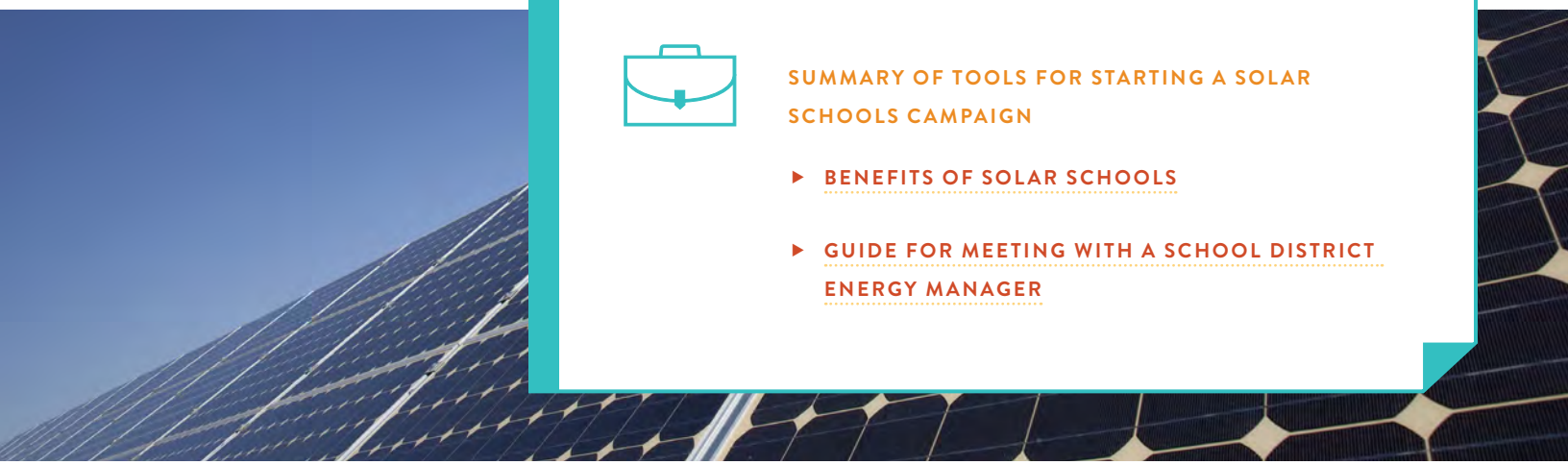
Your goal could range in scope from one school to the whole district. Examples of solar school goals include:

- A solar installation on a specific school
- A solar pilot project with plans for expansion across the district
- A ground-mounted solar array on school district property
- District-wide solar installations on multiple schools.

You may have aspirations for clean energy or climate protection goals that include more than solar. Examples of broader clean energy goals include:

- A net-zero-energy school that produces as much clean energy as it consumes
- Approval of a district climate action plan that includes plans for solar installations for schools
- Passing a resolution committing to achievement of a clean energy goal (such as 100% clean energy) or a climate action goal (such as carbon neutrality) by a certain date
- Establishment of a climate action committee that works with the school board to implement clean energy goals.

Check out the **ADDITIONAL RESOURCES** to find more information on setting a renewable electricity goal.



SUMMARY OF TOOLS FOR STARTING A SOLAR SCHOOLS CAMPAIGN

- BENEFITS OF SOLAR SCHOOLS
- GUIDE FOR MEETING WITH A SCHOOL DISTRICT ENERGY MANAGER

CASE STUDY

Head of the Class: Achieving 100% Clean Energy

The number of schools and school districts that are meeting 100% of their energy needs with clean energy is growing nationwide. Research conducted by the National Renewable Energy Laboratory shows that zero-energy schools are viable in every part of the country.[16] You can be the spark that brings the benefits of clean energy to your school district.

CARBON-NEUTRAL SCHOOL DISTRICT

One of the largest school districts in California has identified itself as an energy leader by setting a goal of becoming carbon-neutral by 2040. In September 2017, the San Francisco Unified School District, representing 136 schools and 55,600 students, passed a Carbon Neutral Schools Resolution.[17] This groundbreaking decision called for the district to phase out fossil fuel use by 2040 and generate all of its power on-site by 2050. The district's plan to achieve this ambitious goal includes a commitment to install solar photovoltaic systems and to design all new buildings to be zero net energy. San Francisco's school district is on track to demonstrate that it is possible for school districts to achieve carbon neutrality at little-to-no additional cost. In the 10 years since launching this initiative, SFUSD has saved over $16 million in energy costs.[18]

Sierra Club's Climate Parents and Ready for 100% campaigns are collaborating to move school districts around the country to commit to 100% clean energy.

LEARN MORE

about 100% Clean Energy School Districts at ClimateParents.org.

Alvarado Elementary School in San Francisco, CA. Credit: San Francisco Public Utilities Commission

Red Wing Community Solar Garden in Red Wing, MN. Credit: IPS Solar

100% SOLAR SCHOOL DISTRICT

Red Wing Public Schools in Minnesota generates up to 120% of its district-wide energy consumption through a 6 MW community solar garden (one of the largest in the country) on school district property. The energy produced by the 15,520 solar panels is shared by the district's six schools and the community. Over the next 25 years, the school district is projected to save about $6 million in energy costs and to earn $1 million in lease revenue. IPS Solar provided teacher trainings and lesson plans to ensure that the district's 2,800 students benefit from the STEM learning opportunities that the solar project offers. This community solar garden model has enabled other school districts in Minnesota—including Annandale, Chicago, St. Cloud, and Columbia Heights—to supply at least 100% of their energy needs from solar.[19]

Discovery Elementary School students explore the rooftop solar lab. Credit: © Lincoln Barbour

CERTIFIED ZERO-ENERGY SCHOOL BUILDING

When the new building at Discovery Elementary School in Arlington, Virginia, opened in 2015, it became the largest building in the country to be certified as zero energy. The building was designed to be 66% more energy efficient than the district average by incorporating optimal solar orientation and shading, LED lighting, low-energy landscaping water systems, and more. Solar thermal water heating and geothermal pumps are utilized for heating and cooling. With a highly efficient design and nearly 500 kilowatts of rooftop solar panels, the school produces more energy than it consumes and saves $100,000 per year in energy costs. In 2018, Arlington Public Schools began construction on its next zero-energy school.

2

BUILD SUPPORT FOR YOUR SOLAR CAMPAIGN

STEP 1:

Identify key stakeholders

With a clear campaign goal established, it is now time to start reaching out to the community to find allies and build support. As you build up supporters and grow your team, you will want to list out the decision makers who can give you what you want, as well as those who can influence them.

The timing and strategy for reaching out to your supporters, influencers, and decision makers will vary for each group. If you have a likely supporter on the school board, you may want to start there and get early buy-in from a decision maker. Another approach is to reach out to different audiences in phases, building up momentum as you head toward the final decision makers. Think of it like a pyramid, working your way up to build consensus from your supporters, influencers, and ultimately the decision makers.

Key Stakeholders

DECISION MAKERS

- Principals
- School board members
- Superintendents

INFLUENCERS

- Facilities/Operations managers
- Energy/Sustainability managers
- Financial managers

SUPPORTERS

Community Stakeholders

- Local solar and clean energy companies
- Community, environmental, and clean energy advocacy groups
- Local governments
- Local utilities
- Media

School Stakeholders

- Parents, PTAs, and parent groups
- Students and student clubs
- Teachers and school staff

Supporters

You will want to continuously expand your list of supporters and grow your team. Since school board members are public officials representing the interests of their constituents, they will want to know that students, parents, and community members in their district support your campaign. Below is a list of potential allies you will want to engage and ask to get involved in your solar schools campaign.

School Stakeholders

- Parents, PTAs, and parent groups
- Students and student clubs
- Teachers and school staff

Community Stakeholders

- Local solar and clean energy companies
- Community, environmental, and clean energy advocacy groups
- Local governments
- Local utilities
- Media

Influencers

Our secondary targets are people whose support you will need to help you persuade the decision makers.

Facilities and energy managers: Energy management of a school or district can be handled by various roles, including facilities, operations, energy, or sustainability managers. The people in these positions will be tasked with the planning and implementation of a solar project. We recommended that you meet with a school or district energy manager earlier in the process (see *STEP 3: Get informed about solar opportunities* in the START A SOLAR SCHOOLS CAMPAIGN section for more details on meeting with a district energy manager). Now is a good time to reach back out to that person and meet with other related staff to update them on your solar schools campaign goals and plans. Make sure you assess their interest and do your best to address any concerns they have, as their support will be critical to convincing the decision makers.

use the
GUIDE FOR MEETING WITH A SCHOOL DISTRICT ENERGY MANAGER
and the
GUIDE FOR MEETING WITH DECISION MAKERS
for meeting tips and a comprehensive list of questions to ask during the meeting.

Financial manager: The economics of a solar project is one of the most important factors for getting it approved by decision makers. There are many different ways to finance a solar installation, and the financial manager will play a key role in deciding what financing mechanism makes sense for your school or district. It is important that the financial manager understand the potential cost savings and economic benefits of going solar.

Decision makers

School boards (boards of education, boards of trustees): School boards are typically responsible for developing and adopting policies, managing budgets, approving capital expenditures/improvements, and facilities planning. A solar installation (whether on one school or several schools) will generally need approval from the school board. School board members are local officials whose job is to represent their constituents and look out for the welfare of students. To achieve your solar goal, you will need to show the school board that its constituents (including students, parents, staff, and the community) are supportive of your campaign and want clean energy to be a priority.

Superintendents: The superintendent is a key stakeholder who manages day-to-day operations and is typically responsible for overseeing the implementation of board decisions. Having the support of the superintendent will go a long way in influencing the school board.

Principals (heads of schools): The principal is a key decision maker at each school included in your solar campaign. While the final decision may rest with school district leadership, the principal is a gatekeeper who should be on board before a solar project can move forward at his or her school.

> **"The school board wants to respond to what the community wants. Much of our clean energy action was in response to community interest. There's a lot of power there."**
>
> GHITA CARROLL
> Sustainability Coordinator, Boulder Valley School District

CASE STUDY

Model for Success: Community Mentors Help Students Shine

Three high school students started a solar schools campaign with the help of a local Sierra Club volunteer.

IN THE FALL OF 2015, three James Madison High School seniors—Sam Ressin, Joyce Chang, and Casey Grage—attended a local Sierra Club meeting in Fairfax, Virginia, and found a mentor who could help navigate the process of getting the tenth largest school district in the country to go solar. Susan Stillman, a Sierra Club volunteer with professional experience in high-tech industries and government contracting, agreed to help guide the students.

The students started a *Solar on the Schools* campaign that began meeting at the public library. They worked hard to get their friends on board with their solar campaign, and they collected over 500 petition signatures in support of installing solar panels at Fairfax County Public Schools. Susan coached them on the technical aspects of going solar in Virginia and on how to effectively advocate to the school board. In January 2016, these students presented to the school board about the benefits of going solar and the possibility of financing the project with a power purchase agreement (PPA). The district began conducting feasibility studies to determine the environmental and economic benefits of utilizing a PPA for solar energy.

Student leaders in Fairfax County, VA advocate for clean energy.

Susan continued to mentor students in the environmental club at James Madison High School, who developed a youth coalition spanning schools across the district. With support from several local environmental groups, they collected over 1,600 petition signatures in favor of *Solar on the Schools*. These student leaders continued their advocacy to the school board. By the end of 2018, the district completed its feasibility study on the potential for solar across the nearly 200 schools and centers in the district. Three years after a few ambitious students started the campaign, the completed feasibility study is informing the district's plans to move forward with solar.

STEP 2:

Develop a campaign plan

Once you have established the goal and identified key stakeholders, you are ready to make a plan for your campaign. Discuss with your team members what you would like to accomplish and think about what it will take to get there. Planning can be challenging, but it's worth investing time on the front end to ensure that your team is aligned on how to reach your goal.

Meet with your team to discuss the following elements of your campaign plan:

Strategy: Coordinate with your team on the path you plan to take to reach your goal. Your strategy should include plans on how to influence the decision makers who can give you what you want. One strategy is to start with going solar at one school and then expand to other schools. If your goal includes a broader district-wide commitment to clean energy, a sample strategy could be to have the school board pass a resolution first to confirm its commitment and to motivate action.

Tactics: Plan the specific actions taken along the path to achieve your campaign goals and to implement your strategy. Work together as a team to decide on what tactics will be effective at building support in your community and influencing your school and district decision makers. An example of a tactic is to collect petition signatures in support of your campaign as a way to show community backing for solar schools.

Benchmarks: Designate mileposts by which you can measure progress toward your goal. Having some intermediate wins to celebrate will help build momentum and keep spirits high. Examples of benchmarks include generating a large number of signatures on a petition, passing a clean energy resolution, winning school board approval of the solar project, and the start of the solar installation.

BRIGHT IDEAS
for collaboration on the campaign plan

Making a plan requires teamwork. It may help for the team leaders to craft the first draft of the strategy as a starting place for group input.

This will help facilitate discussion and bring to light any differences that can be resolved early in the planning process. Try to be inclusive and ensure that you have received input from your core team members.

use the
SAMPLE CAMPAIGN WORK PLAN
to map out your campaign plan benchmarks, action, and timeline. The plan is a starting place that will require continual revisiting as your group progresses toward its goals.

BRIGHT IDEAS
for campaign messaging

Create a memorable slogan for your campaign. Students at Sacajewea Middle School (SMS) in Bozeman, MT used the catchy phrase "Solar Makes Sense at SMS" to gain support and fundraise for solar at their school. Visit GoSolarSchools.org to learn more.

Timeline: The timing will vary greatly depending on the scope of your campaign and the steps needed to meet your goals. The timeline from start to finish for a solar campaign can be two years or longer. Use the **SAMPLE CAMPAIGN WORK PLAN** to map out the steps to reach your goal and estimate the time needed for each step. You can monitor and adjust your timeline as your campaign progresses.

STEP 3:
Create a communications plan

With a campaign plan and strategy in place, you can now develop a communications plan that will inspire your key stakeholders to get on board with your campaign. In order to engage your school community supporters, influencers, and decision makers, make sure you are telling a compelling story that will help your team connect with your audiences and motivate the transition to solar energy. Your plan should include persuasive messaging that communicates the importance of your campaign and effective tactics for reaching each of your different stakeholders.

Parents and students in Albemarle County, VA advocated for "A Brighter Future Through Solar."

For the next step of winning a commitment for solar, it will be important to demonstrate to decision makers that there is community-wide support for solar.

Below are some outreach tactics you can consider to help spread the word and find more supporters:

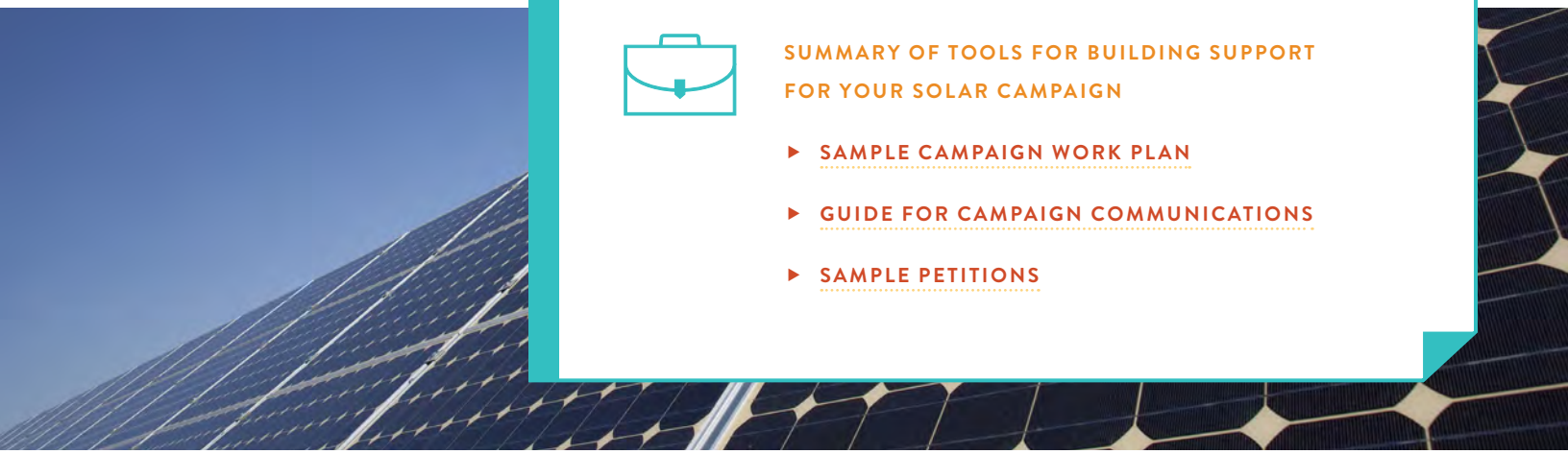
Petition or sign-on letter: Set a goal for the number of signatures you want to capture to help motivate people to participate. Your message becomes more powerful when you can say that 500 people have signed your petition, or when you are able to list the support of influential organizations and businesses in the community. Try to find a creative and public way, ideally involving students, to get your signed petitions in front of decision makers.

Social media campaign: Building momentum for your campaign through social media is important. Create a social media presence (typically using Facebook, Instagram, Twitter, and online parent communities) that communicates your goal. Build up your audience by encouraging people to follow you on social media. Then spread the word for meetings and events through your social channels. You can continue to grow by consistently reaching out to solicit shares and follows of your posts.

Media coverage: Developing a media plan will be helpful to spread the word about your campaign. You can get visibility in local papers by submitting letters to the editor and op-eds. Reach out to the reporter who covers education topics in your local paper. Organizing events to generate media attention can be helpful, especially when you have reached the point when the school board is slated to make a decision about a solar project or clean energy policy you are proposing.

use the **GUIDE FOR CAMPAIGN COMMUNICATIONS** to craft your messaging and strategy for media outreach.

see the **SAMPLE PETITIONS** to help you build a list of supporters.



SUMMARY OF TOOLS FOR BUILDING SUPPORT FOR YOUR SOLAR CAMPAIGN

- SAMPLE CAMPAIGN WORK PLAN
- GUIDE FOR CAMPAIGN COMMUNICATIONS
- SAMPLE PETITIONS

3

WIN A COMMITMENT FOR SOLAR

STEP 1:

Plan your outreach to decision makers

Once you feel that you have a base of support from the community and school experts, the next step is to get in front of your local school board members and superintendent to initiate a dialogue about your solar energy goals. Start by creating a plan for reaching out to decision makers. Your plan may be informed by the existing relationships your team has with decision makers, the role the decision maker plays, or the likelihood that the decision maker will support your goal.

Below are suggestions to inform your strategy for outreach to decision makers:

Roles: Consider the role of the decision maker. Within the school board, you may want to particularly engage the chair of the board and the board member in charge of facilities or capital expenditures.

Potential Supporters: Do some research on who is likely to support and oppose your campaign. You will want to have an internal ally within a school board, and you may want to start with the person who is most likely to support you. You may find hints from their online bios, professional background, or

use the
GUIDE FOR DRAFTING A SCHOOL BOARD RESOLUTION
and the
SAMPLE SCHOOL BOARD RESOLUTIONS
as tools to develop a clear ask of your decision makers.

school board meeting comments as to whether a board member is likely to support your solar schools campaign.

Point Person: Assign a team point person or people for consistency and accountability. You may choose one team member to lead all of the decision maker outreach, or alternatively you may assign one point person for each decision maker.

Timeline: Plan a timeline for when and how you will contact all the decision makers to introduce each person to your campaign and get feedback on where that person stands. You may want to start with more informal one-on-one meetings with each decision maker. If you would like to meet with more than one school board member at a time, you will need to check with your school board clerk or administrator to find out how many school board members are allowed to be together in a private meeting that is not open to the public.

Tracking Outreach: Decide how you want to keep track of your outreach with decision makers and where they stand in supporting your campaign goal. You may want to create a spreadsheet or table and make sure it is accessible to your team. Remind your point people to keep it updated so the team can stay in the loop.

STEP 2:
Meet with decision makers and key influencers

Before you meet with the decision maker, make sure you have developed a clear ask of them to help you meet your goal. While there will be some variations depending on your campaign goal, you will typically be asking a school board to approve either a specific solar project or a wider clean energy commitment.

Seek approval of a solar project

Most solar installations (excluding small, portable solar panels that are not connected to the building or to the electrical grid) will ultimately need school board approval. If your school or district has not yet researched its potential for solar, you could first ask the school board to approve a district-wide feasibility study for solar. Once the study is completed, your team would need to review the results and then advocate for approval of a solar project whose scope is informed by the

findings. If you already have a plan for the scope and scale of a solar project or have received preliminary proposals from local solar installers, then the next step will be to discuss the project proposal with decision makers and to get a vote on the project added to the agenda for an upcoming school board meeting.

Seek approval of a clean energy resolution or policy

Particularly if your school district has already had some success in installing solar on schools, you may have set your goal for a school district's commitment to clean energy or greenhouse gas reduction. Once approved, a resolution formalizes a district's commitment to clean energy and creates the mandate for implementation by staff. While a board resolution is not a prerequisite for getting a solar project approved, it is a useful tool for the school district to establish policy, guiding principles, and goals (such as achieving 100% clean energy or carbon neutrality). While a clean energy resolution establishes a foundation for future solar projects, it typically does not include language about a specific solar project.

Drafting a resolution to propose to the school board will help your team coalesce around the goals and values of your campaign and communicate your vision to the school community. Once you share your draft with the school board, be open to changes they suggest in order to get it approved.

Prepare for the meetings with decision makers

High school students present a clean energy resolution to the school board in Albemarle County, VA.

Meetings with decision makers will provide you with the opportunity to listen and learn about individual and board-level support for going solar, their top concerns, and what they will need from you to endorse your campaign goal. Your first encounters should clearly communicate the case for clean energy, but also focus on listening in order to gain an understanding of where the decision makers currently stand on the issue.

Start gathering the materials you will want to bring to the meeting to make the case for your solar schools campaign goal.

Highlight the relevant benefits: Review the BENEFITS OF SOLAR SCHOOLS resource and decide on the ones that will resonate best in your community. For instance, enhanced community resilience might mean more to schools located in areas with frequent power outages.

LEARN MORE AT
GOSOLARSCHOOLS.ORG

Get inspired by solar school success stories.

Download and share the one-page infographic *Lets Go Solar! A How-to Guide for Schools* to provide decision makers with a short overview on the six steps to go solar.

Use the map to collect information about nearby solar schools and the funding mechanisms and sizes for those installations.

Collect examples of success stories: School decision makers will want to be reassured that what you are proposing is not risky, but instead has been proven successful. Try to find examples that most closely resemble your school or district and your campaign goals.

Anticipate and address potential concerns: Based on the research you collected from meeting with a school district energy manager, you may be able to already anticipate and address concerns that the decision makers may have. For example, if the energy manager had gotten quotes for solar installations five years ago that seemed too expensive, contact some local installers to get an updated estimate or a ballpark of typical costs today. Costs are likely to have dropped in recent years or new options for financing may now be available

Gather resources to bring to the meeting: Begin collecting other materials that may be helpful to bring to the meeting, including an agenda, a description of your campaign goals, and any other materials you want to hand out. While you may not have all the answers, the decision makers will be interested in any information you can bring about known projected costs, projected savings, financing options, and technical feasibility.

STEP 3:

Secure a commitment for solar

The school board will need to take a vote to approve your solar project or pass a clean energy resolution. You'll want to feel confident going into the school board meeting that you've got the votes required to win. Here are some steps to make sure you're on the path to victory.

use the
GUIDE FOR MEETING WITH DECISION MAKERS
for a template agenda for a positive meeting with your decision maker.

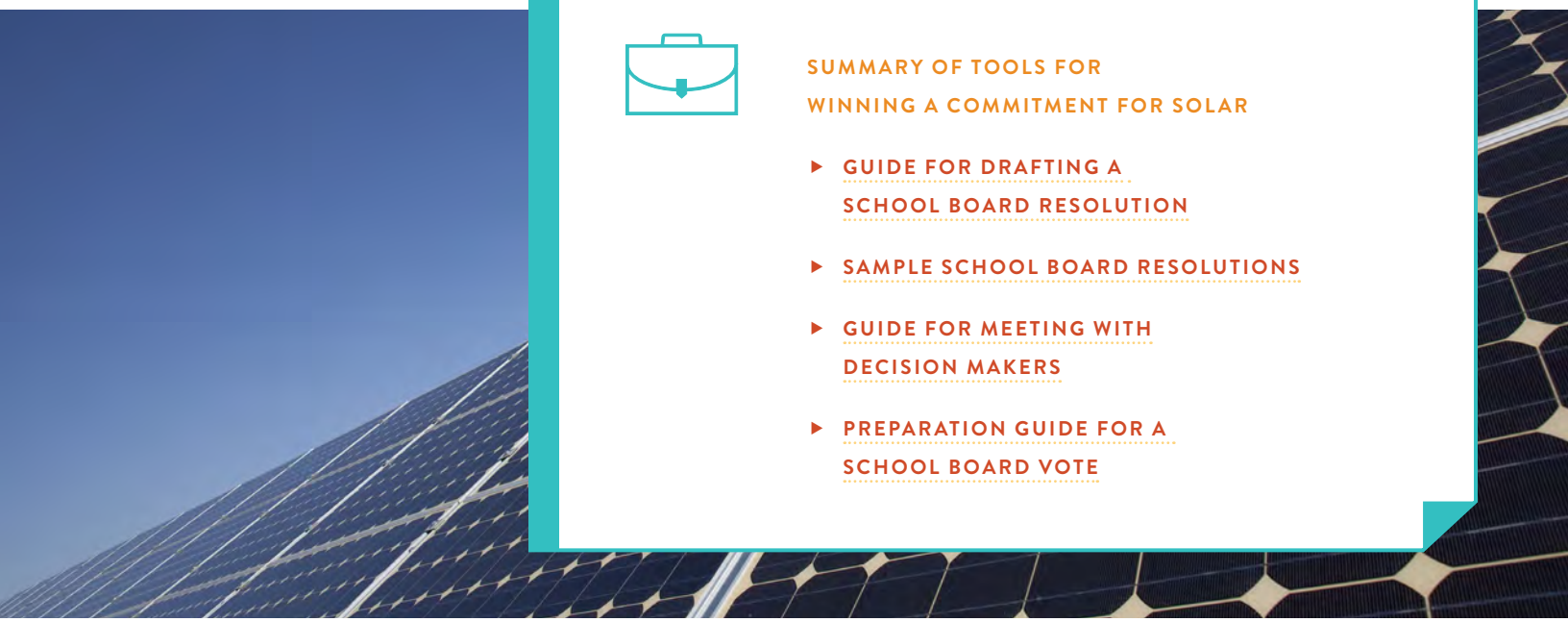
Secure individual support from each board member: Work with each school board member to address their questions and concerns, and explicitly ask for their support of your campaign. Aim to have a majority of board members supporting the approval of your solar project or clean energy resolution before it comes up for a vote at a school board meeting. If you are sharing a draft resolution, be open to modifications that might improve or expand upon it. If you amend the resolution, make sure that all the board members are aware of any changes, and that they remain in support.

use the
PREPARATION GUIDE FOR A SCHOOL BOARD VOTE
to get organized for the school board meeting vote.

Students advocate for solar at one of the largest school districts in the country. Read the ***case study on page 23*** *to learn more.*

Address the concerns of potential opponents: If your school district's decision makers or key influencers express concerns or opposition, facilitate an open discussion to clearly understand and address those concerns. Bring in any resources or experts, as needed, to answer concerns. For example, if the superintendent is worried about clean energy projects being too expensive, invite a solar developer to share a specific, detailed scenario demonstrating the financials.

Schedule a vote on your campaign at a school board meeting: In order to get your solar project or clean energy policy on the agenda of a school board meeting for a vote, you will need to request that a school board member introduce it for adoption. Once you feel secure that the majority of school board members will vote in your favor, work with a school board member who has supported you to add your campaign on the agenda for an upcoming school board meeting.

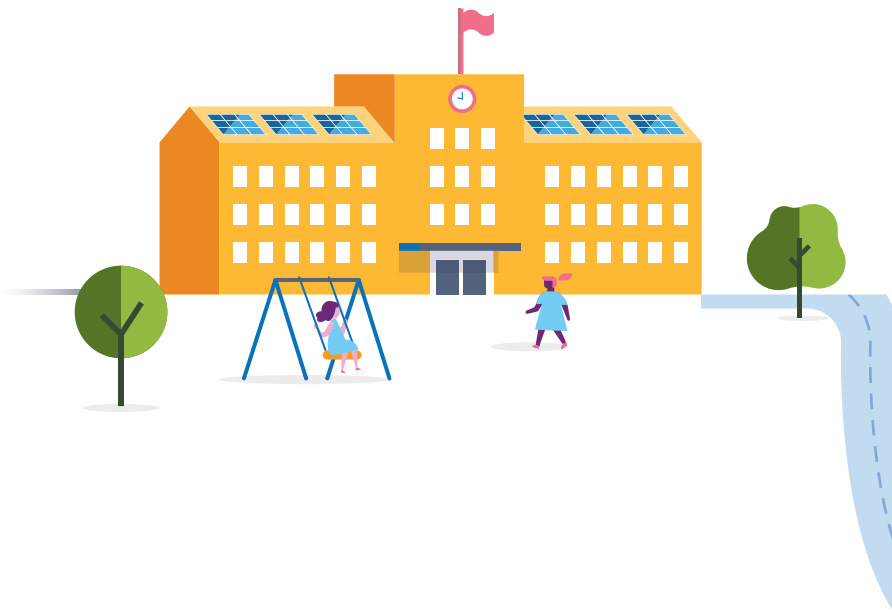


SUMMARY OF TOOLS FOR WINNING A COMMITMENT FOR SOLAR

- GUIDE FOR DRAFTING A SCHOOL BOARD RESOLUTION
- SAMPLE SCHOOL BOARD RESOLUTIONS
- GUIDE FOR MEETING WITH DECISION MAKERS
- PREPARATION GUIDE FOR A SCHOOL BOARD VOTE

4

SUPPORT THE COMPLETION OF THE SOLAR PROJECT



SCHOOL BOARD APPROVAL is a critical step that creates the authority for staff to move forward. You can continue to play an important role in ensuring that there is follow-through on the commitment to solar. Your team can continue to maintain grassroots pressure and help ensure that there is a timeline and plan for completing a solar project. Make sure there is a clear way that your core team can stay engaged and updated throughout the project implementation process.

Implementation of a clean energy resolution or policy

If your request of the school board was for approval of a clean energy resolution or policy, then the next step is for the school district to move forward with a plan and timeline for implementing clean energy projects in alignment with that policy. Keep the momentum up for the school or district to achieve progress toward the adoption of solar. Stay in touch with your clean energy champions on the board, the superintendent, and the facilities director to discuss ways your team and the broader community can continue to provide support moving forward.

Since the implementation of a clean energy policy may involve a longer timeline, your team could advocate for the creation of a clean energy committee that will ensure that next steps are taken toward the planning and installation of solar projects at your school or throughout the district. Request that the committee include a diversity of stakeholders, including the students, parents, and community members who were involved in the development of the clean energy policy and will follow through on the implementation of clean energy projects.

Snail Lake Education Center in Shoreview, MN. Credit: IPS Solar

Development of a solar project

If your school board has approved a solar project, the next milestone is selecting a project developer. Public school districts will have an open process to select the project developer and will typically issue a request for proposal (RFP) to solicit bids from contractors who will compete for the solar project. If your goal is to install solar on a private or independent school, this type of procurement process may not be required, but it is still a good practice.

Your team can still stay engaged in the process for selecting a solar developer and ensuring completion of the project. While developing the scope and parameters of the project and selection of the project developer is the job of the district staff and the school board, your team can provide input, keep up community support through this process, and help ensure that the school district follows through to project implementation. Listed below are some ways your team can stay involved in the development process.

Development of a Request for Proposal

Share resources with school district leaders: Check out the Solar Project Development section in ADDITIONAL RESOURCES to find resources to share that offer best practices and guidance on writing an effective RFP.

Facilitate ongoing communication: Ensure continued communication between the school district and the community throughout the project development process. Communicate with the decision makers while the RFP is being crafted, and weigh in on factors that are important for you.

Help research financial incentives: Solar financing options vary widely across the country, so a school district may need additional help in identifying the best way to fund a solar project. Visit the Resources page at GoSolarSchools.org to find a list of solar financial incentives that are available to schools nationwide and by state.

Students at West Bloomfield High School near Detroit, MI designed and installed a solar system that can power the school's science department.

Advocate for design that enhances student learning: Solar energy systems installed on schools can be designed to include educational components, such as a ground-mounted demonstration system or integrated technology that shares the solar generation data with students. While the solar project is being designed, you can be an advocate for leveraging the solar technology to enhance student learning. Ask to make sure that teacher training to integrate solar energy into the classroom learning is included in the project budget.

Secure a timeline for completion: Obtain a timeline from the school board on developing and issuing an RFP for your clean energy project and hold them accountable to it.

Selection of a solar project developer

After the RFP is issued, the school district will collect proposals from applicants and then choose a project developer. While the selection of the project developer will be the role of the school district staff and school board, below are some ways that your team can stay involved:

Help spread the word: Once the RFP is issued, send it to solar companies and project developers who may be interested.

Stay engaged with the project developer selection process: Ask for opportunities for the public (particularly involved students, parents, or teachers) to be on the review committee to select the project developer.

Continue to follow up with the school board: Ensure that the process to select a project developer and complete the clean energy project continues to move forward in a timely manner.

Governor Terry McAuliffe joined the ceremony to celebrate the largest solar installation at that time at any school district in Virginia. Credit: Secure Futures Solar

Celebrate solar success

Once you have achieved your goal and made progress in advancing solar on your schools, celebrate your contribution to a brighter future!

Recognize and celebrate: Thank and appreciate your core team and supporters for their time, energy, and commitment.

Reach out to local media: Share the success story of your campaign.

Help organize a ribbon-cutting ceremony (or "solarbration"): Invite school board members, municipal leaders, parents, students, and community members to join and celebrate the project's success.

Write thank-you letters: Thank the superintendent, the school board members, and key district staff for their support in the campaign.

SPREAD THE SOLAR SCHOOLS MOVEMENT

Interactive solar energy dashboard at Discovery Elementary School in VA. Credit: Arlington Public Schools

YOUR INVESTMENT OF YOUR TIME and energy into a solar schools campaign will yield benefits for the students and the community for generations to come. Leverage your success to help others make the transition to clean energy and keep making progress toward a brighter and healthier future for us all.

Create lasting learning opportunities

Even after the solar project is installed and completed, there are a variety of ways that your team can be engaged with clean energy educational opportunities. Community members can get involved in giving tours of the solar technology on-site, measuring and optimizing the school's energy consumption and generation, and sharing with the community or other schools the benefits of clean energy.

When schools go solar, it has a positive effect on the students, who are able to incorporate what they learn about energy-saving behaviors and clean energy into their day-to-day lives. This raises clean energy awareness among families, as students teach their parents about improving their energy habits and the benefits of clean energy. Each family in your school community can help spread energy awareness and share the benefits of clean energy across their networks.

Go to the **ADDITIONAL RESOURCES** section for links to energy curricula and opportunities for students to engage with solar technology.

> **"We learn from our building. Every day students learn from the dashboard the amount of energy produced and consumed [and] how the building performs in weather."**

KATHY OLMSTED
Fifth-grade teacher at Discovery Elementary School, VA

Kern High School in Bakersfield, CA. Credit: Sage Renewables

Leverage your success for broader change

Your campaign can be inspirational for other school districts to make the switch to solar. Only 5% of K-12 schools in the U.S. have gone solar, and you can help share the movement to the remaining 95% of schools nationwide.[20]

Your achievement can also be promoted to other communities to demonstrate the power of students, parents, teachers, and staff to make positive change. You can invite community members and school board leaders from other districts in your region to learn from the solar success in your schools.

JOIN THE SOLAR SCHOOLS COMMUNITY

GET ON THE MAP

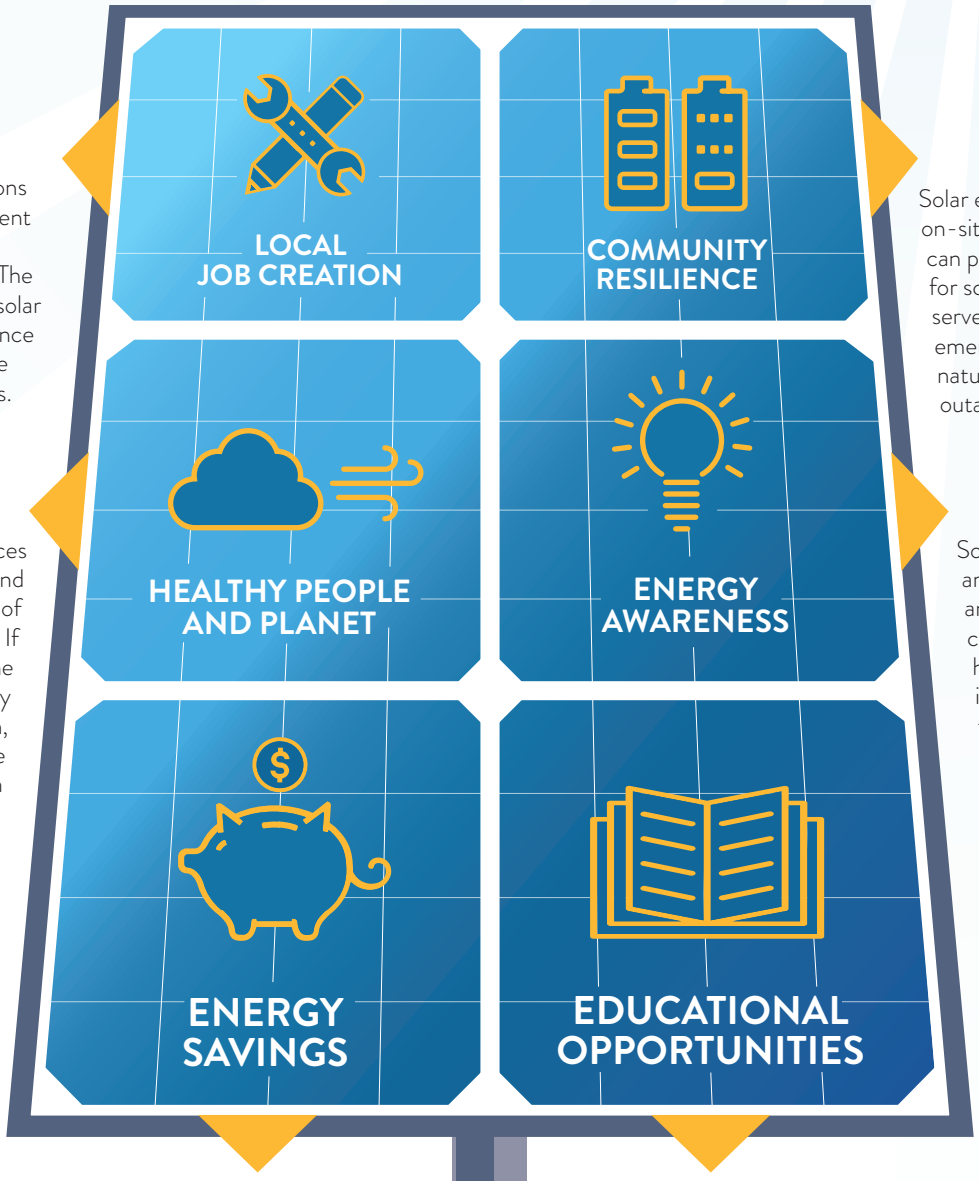
Visit GoSolarSchools.org and fill out the form to add your solar installation to our solar schools map.

SHARE YOUR STORY WITH US

and help inspire other schools to go solar by emailing us at solarschools@Generation180.org.

SOLAR SCHOOLS CAMPAIGN TOOLS

Benefits of Solar Schools



On-site solar installations support local employment and create vocational training opportunities. The number of nationwide solar jobs has grown 168% since 2010 and is now double the number of coal jobs.

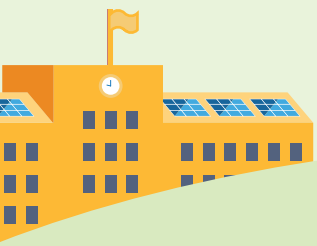
Switching to solar reduces fossil fuel pollution and protects the health of people and the planet. If all K-12 schools in the U.S. were completely powered by the sun, it would eliminate the carbon dioxide pollution equal to shutting down 18 coal-fired power plants. Cleaner air would reduce the 13 million school absences per year caused by childhood asthma.

Solar energy systems with on-site battery energy storage can provide backup power for schools, which commonly serve their communities as emergency shelters after natural disasters or power outages.

Solar schools are models for students and their families to make clean energy choices at home. Solar installations increase the likelihood of further solar adoption in the same neighborhood.

At $8 billion a year, energy is the second largest expense for U.S. schools. Schools can reduce and stabilize energy costs by switching to solar. Those savings can be reinvested back into student learning and enrichment.

Student-led solar campaigns develop leadership skills and build civic engagement. Access to solar technology provides real-world learning opportunities in the STEM fields of science, technology, engineering, and math.



Guide for Meeting with a School District Energy Manager

School and district officials, such as the facilities manager or energy manager, can help you understand the potential for solar in your school district and the practicalities of what is needed to advance your goal. This person will advise your school and district decision makers on any solar project. Establishing a good relationship and obtaining support from this stakeholder is important for the success of your campaign.

Introductions

- Introduce yourself and your group, including your relationship to the school. Show appreciation for the meeting and, if possible, recognize the district for a recent clean energy or sustainability accomplishment.
- Describe your interest in solar and the potential benefits for the school district.
- Emphasize your interest in supporting and collaborating with the district. Share any key data points you have collected, including any known opportunities for the school district to save money while advancing smart energy solutions.

Key questions

- What are the school's/district's annual energy usage and costs?
- What is the current energy mix supplying the school(s)?
- What clean energy or energy efficiency initiatives are already in place or underway?
- What is the electric utility serving the school/district? Is the district participating in any utility-sourced clean energy projects?
- Has the school/district considered solar energy in the past? What were the barriers/opportunities that were discussed?
- Has a solar feasibility study already been done for the school(s) that includes potential for on-site, rooftop, and ground-mounted installations, as well as the potential for off-site installations on other school district properties?
- Have you already met with or received proposals from solar installers?
- What energy conservation or efficiency measures are already in place? Have there been any recent energy audits completed or energy efficiency improvements made?
- What do you see as the main barriers to adopting [more] solar energy at the school or district?
- Do you have advice on setting a solar target for the school district?
- How are decisions about energy made? Do you have suggestions for other staff or stakeholders to contact who are important to get on board or who would likely be supportive of the campaign?
- Are you aware of any city- or state-level clean energy or greenhouse gas emissions goals to which your school district can contribute?

Closing

- Summarize what has been said and give thanks for the information.
- Request permission to contact them again, once you are further along in the process.

Sample Campaign Work Plan

SAMPLE SOLAR SCHOOLS CAMPAIGN WORK PLAN

KEY BENCHMARKS	SUPPORTING ACTIONS	RESPONSIBLE PARTY	TIMELINE
Start a Solar Schools Campaign			
Connect with Generation 180	• Visit GoSolarSchools.org • Download *How-to Guide for Schools* • Review Solar Schools Campaign Overview • Check out the solar schools map to find nearby schools that have gone solar	Team Leaders	Month 1
Establish core team	• Conduct outreach • Hold kick-off meeting • Secure commitments	Team Leaders	Month 1
Conduct background research	• Review state solar policies • Meet with school district energy official • Contact local solar installers	Team	Month 2
Meet with school district energy official	• Schedule meeting • Develop clear agenda focused on desired outcomes • Prepare key content points and questions in writing in advance	Team Member	Month 2
Decide on campaign goal	• Meet with core team to discuss specific goal for the campaign • Revisit and refine goal after research and meetings are completed	Team Leaders	Months 2-3
Build Support for Your Solar Campaign			
Identify key stakeholders	• Meet with your team to identify key stakeholders and discuss how to best reach out to these people	Team	Months 3-4
Develop strategy and write work plan	• Meet with core team to form strategy and work plan	Team	Months 3-4
Develop communications plan	• Meet with your team to review and form a communications and outreach plan	Team	Months 3-4
Win a Commitment for Solar			
Secure community support	• Schedule meetings with PTA, superintendent, other key leaders as identified in stakeholder map • Implement tactics to help your campaign gain broad visibility and support (e.g., petition)	Team Members	Months 4-5

Meet with school board members to introduce solar schools campaign	• Schedule meeting • Develop clear agenda focused on desired outcomes • Prepare key content points and questions in writing in advance	Team Members	Months 4-5
Secure commitment from the majority of board members	• Meet with school board members to secure support for a solar installation and request to have it added to the agenda	Team Members	Months 5-6
Add approval of solar installation to school board meeting agenda	• Keep communicating with school district officials about placement on the agenda • Reach out to your supporters to attend meeting	Team	Months 6-7
Prepare school board vote on solar installation	• Create plan for school board meeting • Prepare key spokespeople to speak at the meeting • Draft press advisory and release to engage the media	Team	Months 6-7
Support the Completion of the Solar Project			
Ensure a request for proposal (RFP) for the solar project is sent out	• Meet with district officials to discuss what details about the solar project you want included in the RFP • Once the RFP is announced, share it with local solar installers	Team	Months 8-10
Support selection of the solar installer	• Give feedback on the RFP proposals under consideration	Team	Month 10-12
Recognize the start of solar installation	• Encourage the district to create a media/photo opportunity for the beginning of construction • Share the news with press and on social media	Team	Month 15
Celebrate the completion of the solar installation	• Encourage the district to hold a ribbon-cutting and to issue a press release • Share the news with press and on social media • Help plan the ribbon cutting event and invite school district leaders, community members, and press to celebrate the solar project. • Share the news with press and on social media	Team	Month 18
Spread the Solar Schools Movement			
Create learning opportunities for students and the community	• Work with the principal(s) to develop opportunities for students and community members to engage with and learn about the solar installation	Team	Ongoing
Encourage others in the community to go solar	• Write a blog post or case study about your solar project to share on the school district website, newsletter, or social media • Share your story with other community groups and school districts	Team	Ongoing

SOLAR SCHOOLS CAMPAIGN WORK PLAN TEMPLATE

KEY BENCHMARKS	SUPPORTING ACTIONS	RESPONSIBLE PARTY	TIMELINE
Start a Solar Schools Campaign			
Recruit a core team			
Connect and collaborate with your team			
Get informed about solar opportunities			
Set a goal for your solar campaign			
Build Support for Your Solar Campaign			
Identify key stakeholders			
Develop a campaign plan			
Create a communications plan			
Win a Commitment for Solar			
Plan your outreach to decision makers			
Meet with decision makers and key influencers			
Secure a commitment for solar			
Support the Completion of the Solar Project			
Secure a timeline for completion			
Support issuance of a request for proposal (RFP)			
Support the selection of a solar project developer			
Celebrate solar success			
Spread the Solar Schools Movement			
Create learning opportunities for students and the community			
Encourage others in the community to go solar			

Guide for Campaign Communications

Modified from the Sierra Club Volunteer and Chapter Communications Handbook

1. **Develop your campaign story.**

   (a) **Frame the Issue.** Discuss how you can best connect to the community on the benefits of solar energy for your schools. What are the immediate and long-term benefits? Who is affected? What values does your audience share? What are news hooks for the issue? It can be helpful to have talking points in the following three categories to share:

   - *Your story.* Sharing your personal experience (and that of your team members) opens you up to supporters and decision makers to discover common values and interests. Talking points should touch upon why you are involved in this effort. Do you have children that attend the schools? Did you grow up in the community? Have you personally experienced the benefits of solar energy? You can share this story in one-on-one meetings, community events, in correspondence, or through social media outreach.

   - *The "need for change" story.* Once you have a personal and emotional hook, then you will want to explain why switching to solar is important to the students, parents, school, and greater school community. You may want to include the benefits of going solar and the urgency of addressing climate change.

   - *Your school's/district's solution story.* The final element of your narrative is the pathway for successfully transitioning your school to solar energy. Convey a vision and information about how the switch to solar makes good sense for the school's finances, educational mission, and commitment to a healthy future. Include any solar success stories from nearby districts or regions.

   Create a slogan for your effort

   The slogan should be short (no more than 10 words) and memorable. Sample campaign slogans include "A brighter future through solar," "Clean generation for our generation," "Take charge of our future," and "Switch to solar."

   (b) **Identify spokespeople**.

   Who are the best messengers to reach your target audience? Is there diversity among your spokespeople—such as students, parents, and teachers that support your campaign?

2. **Research and target your media landscape**.

   Make a list of contacts at local TV and radio stations, newspapers, and online news sources that may help to spread awareness of your campaign. Identify any local press, reporters, or bloggers who focus on education or energy. The following are suggested ways to receive coverage. Select the ones that will most effectively reach your target audience:

- News article
- Op-ed
- Radio news/talk
- Television news/talk
- Podcasts
- Blogs
- Facebook/Twitter
- Video production/posting
- Other

3. **Earn media coverage about your campaign**.

   - Make sure your campaign has a website or social media page, so that reporters can easily learn more details about your solar schools campaign.

   - Pitch your story to local press by phone, email, or social media. Even if the reporters don't respond to your initial outreach, keep them in the loop with any important updates on your campaign.

   - Concentrate your media outreach before a key vote at a school board meeting. Prepare a press release in advance along with additional photos, diagrams, or other materials you would like the press to have.

   - Before a key school board decision or meeting, follow up with calls to make sure the reporters or editors are aware of your event, and inquire whether they plan to attend.

   - After a key school board decision or meeting, contact reporters directly and send a press release that outlines the key pieces of the story and includes quotes from your core team.

Sample Petitions

PETITION TEMPLATE FOR A SCHOOL DISTRICT CLEAN ENERGY RESOLUTION

Sign this petition to support a brighter, healthier future for our youth. Encourage School Board of [***School District Name***] to pass a resolution declaring its ongoing commitment to reduce energy demand and increase clean energy sourcing!

	FULL NAME	EMAIL	SIGNATURE
1			
2			
3			
4			
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PETITION FOR 100% CLEAN ENERGY SCHOOL DISTRICTS CAMPAIGN

Developed by Sierra Club's Climate Parents program

LET'S POWER OUR SCHOOL DISTRICT WITH 100% CLEAN ENERGY!

Our school district can be a clean energy leader within our broader community, and, by committing to 100% clean energy, we can improve the health of our students, save money that can be invested into students and classrooms, and do our part to tackle climate change.

With a commitment to 100% clean energy, our district can:

- **SAVE MONEY** – Energy efficiency reduces costs, and electricity generated by clean energy will soon be cheaper than fossil fuels.
- **INVEST IN OUR STUDENTS** – Funds saved by switching to clean energy can be used for classrooms, teachers, and enrichment activities.
- **IMPROVE HEALTH AND PERFORMANCE** – Clean energy improves indoor air quality, which reduces the effects of asthma and enables students to better focus on learning.
- **ENHANCE LEARNING** – On-campus clean energy projects serve as laboratories for students to gain real-world experience in applied science, technology, and engineering.
- **CREATE NEW JOBS** – Sixty percent of funds for energy efficiency are spent on local labor, and the clean energy industry is expanding its workforce.
- **REDUCE CLIMATE AND ENVIRONMENTAL IMPACTS** – Switching from fossil fuels to renewable energy sources is essential for protecting air, water, and the global climate.
- **BUILD COMMUNITY RESILIENCE** – School buildings frequently double as emergency shelters and evacuation centers when disaster strikes. Solar plus battery storage can provide power and light to displaced community members even when grid power is down.

We, the undersigned, support [***School District Name***] making a commitment to 100% clean energy!

NAME	ROLE (Parent, student, community member, etc.)	ZIP CODE	EMAIL

Guide for Drafting a School Board Resolution

TIPS FOR DRAFTING A SCHOOL BOARD RESOLUTION THAT ADVANCES CLEAN ENERGY

- **Create a clean energy task force:** Establishing a clean energy task force is a best practice that will help ensure that there is a group that is charged with planning and overseeing implementation of your solar commitment.

- **Set goals for the adoption of clean energy sources:** Since a resolution provides a vision and long-term commitment, it is a good idea to broaden the scope beyond just solar energy. Depending on the goals of your campaign, your resolution can include goals for a transition toward carbon neutrality or 100% clean energy. It can also provide guidance on what types of clean energy sources you intend to use in addition to solar (such as wind, geothermal, and low-impact, small-scale hydropower where available). Your resolution may set targets for phasing out the use of nuclear energy and fossil fuels (i.e., coal, natural gas, and oil).

- **Set a local energy generation goal:** The resolution can include a goal for how much of the school district's energy needs will be met by on-site or local clean energy generation. You can consider including a preference for or commitment to local contractors and suppliers for the project.

- **Commit to broader climate action:** Beyond the transition to clean energy sources, you may want to address broader climate action and add goals for transitioning to electric school buses, improving walkability in school neighborhoods, increasing energy efficiency, expanding recycling and composting, and more. See the ADDITIONAL RESOURCES section for a recent report on the viability and benefits of electric school buses.

- **Set a clear target date:** Identify a target year for your clean energy campaign to be achieved. For instance, the 100% Clean Energy School Districts campaign led by Sierra Club's Climate Parents program sets a goal for school districts to run on 100% clean electricity by 2030, and for districts to have moved away from fossil fuels for heating, cooling, and cooking by 2045.

- **Emphasize the link to educational opportunities:** Include in the resolution the opportunities that on-site solar and other clean energy technology can offer to enhance authentic, hands-on learning in STEM fields.

Sample School Board Resolutions

CLEAN ENERGY RESOLUTION

For Albemarle County Public Schools
November 8, 2018

WHEREAS, Albemarle County Public Schools is committed to personal and academic excellence and preparing all current and future students to be engaged citizens who make contributions to the well-being of their community, including the natural environment; and

WHEREAS, there is scientific consensus regarding the reality of climate change and the recognition that human activity, especially the combustion of fossil fuels that create greenhouse gases, is an important driver of climate change; and

WHEREAS, climate change has been widely recognized by government, business, academic, and other community leaders as a worldwide threat that is harming our economy, safety, public health, and quality of life now and in the future; and

WHEREAS, children represent a particularly vulnerable group because greenhouse gases emitted into the atmosphere will continue to accumulate over the coming decades and will profoundly impact our current students throughout their lives, as well as the lives of future generations; and

WHEREAS, actions that reduce climate pollution and increase energy efficiencies will also lead to a cleaner environment, a better quality of life for both students and community members, energy security, local job security, and increased financial security; and

WHEREAS, through buildings, transportation, practices, and partnerships, Albemarle County Public Schools strives for energy efficiency, sustainability, and eco-friendliness; and

WHEREAS, renewable power installations, energy conservation initiatives, and fuel-efficient transportation provide an educational opportunity for students and employees for everyday teaching and learning; and

WHEREAS, Albemarle County Public Schools has been deliberate and proactive in taking actions directly related to climate protection, including:

- In 2012, installation of a 42 kilowatt photovoltaic system at Henley Middle School;
- In 2014, installation of solar-powered tables/plugs to charge devices at Western Albemarle High School;
- In 2015, execution of the first power purchase agreement in the Commonwealth of Virginia, a 1.1 megawatt system that included the installation of more than 3,000 solar panels on six schools;

- In 2017, recognition of Albemarle County Public Schools by the U.S. Department of Education with a Green Ribbon School Award for its commitment to renewable energy, particularly through the expansion of solar power at schools and other division buildings; and
- In 2018, implementation of a $7.5 million Guaranteed Energy Savings Performance Contract to provide energy efficiency and infrastructure upgrades to 22 schools, which is expected to save more than $8.7 million over the 12-year term; and

WHEREAS, Albemarle County Public Schools is committed to leveraging all available resources responsibly and efficiently to maximize student services, improve public health/attendance, and ensure quality instruction; and

WHEREAS, the Albemarle County Board of Supervisors passed a resolution in September 2017 to reaffirm commitment to support local actions to reduce climate pollution and has adopted long-term strategic goals to protect natural resources, safeguard the quality of life of current and future generations, foster economic prosperity, and invest in critical infrastructure;

NOW, THEREFORE, BE IT RESOLVED, that Albemarle County Public Schools commits to continue to expand efforts to reduce the energy use of buildings and operations through conservation and efficiency upgrades, as well as secure renewable energy systems where practical, such as solar, for current and future school buildings that result in reduced dependence on fossil fuel energy sources and increased utility cost savings; and be it

FURTHER RESOLVED that Albemarle County Public Schools commits to continue to expand efforts to reduce greenhouse gas emissions from transportation of students, district-wide staff, and the larger community.

Introduced on [***date***] by:

Adopted and approved by the
Board of Education of Albemarle County Public Schools
at a regular meeting held on [***date***].

100% CLEAN ENERGY SCHOOL DISTRICT

Model resolution developed by the Sierra Club's Climate Parents program

You can use this template to create a proposed 100% clean energy resolution for your school board. The resolution can be customized for your district, and we provide a range of core elements you can use and/or modify. You may also identify additional rationales specific to your context to include.

SIERRA CLUB

BOARD OF EDUCATION
[*School District*]
[*Location*]

CLIMATE PARENTS

Resolution

WHEREAS, schools, school districts, and cities around the country are making commitments to run on 100% clean energy to improve public health and to help tackle climate change; and

WHEREAS, K-12 schools in the U.S. have an important part in reducing carbon pollution from buildings, given that they are major energy consumers, using as much energy as 43% of all office space nationwide; and

WHEREAS, a reduction in emissions from dirty energy sources results in tangible improvements in student health and performance, particularly among the most vulnerable; and

WHEREAS, according to the U.S. Environmental Protection Agency, energy-related expenses fall second only to personnel as the largest expenditures in school district budgets, and resources that can be saved on energy bills can be redirected into students and classrooms; and

WHEREAS, school buildings—which are the primary source of emergency shelter during disasters—can be equipped with solar and battery storage to ensure that displaced community members have access to heat and light when grid power fails; and

WHEREAS, [***school district***] is dedicated to supporting programs and strategies to make schools climate-safe, energy-efficient living laboratories teaching children to understand STEM concepts through clean energy applications; and

WHEREAS, we acknowledge [***school district***]'s contribution to climate change from on-site sources including from fossil fuels used for heating, [***list other uses as appropriate for district, including source of electricity***]; and

WHEREAS, [***school district***] is committed to principles of equity, justice, and inclusion, and transitioning to 100% clean energy can help advance these goals by a) saving money that can be invested into under-resourced schools, b) helping to address climate change, which disproportionately impacts low-income communities and communities of color, and c) creating STEM learning opportunities; and

WHEREAS, a 100% Clean Energy School District is one in which the amount of clean energy brought into, or generated by, schools equals or exceeds 100% of the annual energy consumed within that school or district; and

WHEREAS, "clean energy" includes energy derived from wind, solar, geothermal, and wave technology sources that have significant associated public health benefits that can address pressing environmental justice challenges in sensitive communities locally and nationally. "Clean energy" specifically excludes energy derived from fossil fuels, nuclear, incineration of municipal and medical waste, and large-scale future hydroelectric development. Low-impact, small hydropower, and some forms of small-scale biomass may be considered "clean energy" after being evaluated for public health, sustainability, and environmental justice implications; and

WHEREAS [***option to insert additional local conditions that this resolution will help address—e.g., utility rates are expected to increase dramatically in the next few years; city or county commitment to climate action, clean air, energy independence, fiscal responsibility, and community health***]; and

WHEREAS [***option to insert additional policies and plans the school district has already developed that this resolution would support the implementation of—e.g., sustainability plans, cost reduction mandates, etc.***];

NOW, THEREFORE, BE IT RESOLVED, that the Board of Education of [***school district***] hereby establishes the goal of achieving 100% clean electricity by 2030 (from renewable resources such as wind and solar only) and phasing out its use of natural gas by 2040; and

The Board of Education of [***school district***] calls for the school district to commit to transition to 100% clean energy in the form of wind and solar, and energy efficiency measures within the electricity sector by 2030, and all energy use sectors including heating and transportation by 2040. The Board of Education requests that the school district appoint a taskforce to create and oversee an implementation plan by [***date***] to meet the clean energy goal. The taskforce should be selected through a transparent and inclusive process that includes community members and relevant stakeholder groups; and

Planning and implementation of our 100% clean energy commitment shall include measures that enhance equity in our school district and provide student learning opportunities in STEM and sustainability; and be it

FURTHER RESOLVED that the Board of Education calls on city, state, and federal officials and agencies to take swift effective action on climate change to protect current and future students.

Introduced on [***date***] by:

Adopted and approved by the
Board of Education of [***school district***]
at a regular meeting held on [***date***].

Guide for Meeting with Decision Makers

1) **Introductions**

- *Gratitude:* Express thanks for the meeting and especially for something they have done that you appreciate.
- *Meeting time:* Confirm how long the person has to meet with you and plan accordingly to get your main points in.
- *Team introductions:* Each person can introduce him/herself briefly. Choose a few spokespeople to give a longer introduction that includes connection to the school system and what values or experiences fuel your passion to work for clean energy (e.g., I am a mom of two kids in the school system; I am retired and I have been active in the community in advancing clean energy). If the group is small, each person can share a bit more.
- *School board member introduction:* Ask a question that will allow the elected official to introduce him/herself more and to help establish a connection with this person (e.g., "What inspired you to run for the school board?" or "What was your vision for running for the school board?"). Listen to the answer and think about how that applies to your vision for clean energy.

2) **Share the Vision for the Solar Schools Campaign**

- *Explain the vision* for solar schools and why it is beneficial.
- *Acknowledge the progress* that has already been made and the benefits to the school(s) and the students.
- *Share* why solar schools matter to you and your personal interest in this vision.
- *Make the case* that transitioning to solar is realistic and achievable.

3) **Listen to the Board Member's Response to the Vision**

- *Welcome feedback, questions, or comments* regarding the issue.
- *Ask what is currently under consideration* for solar on schools and what that person's reaction is to it.
- *Ask for recommendations* on what you can do to make it easier to increase support for this vision. Ask how you can support the board member and partner with him/her toward this vision.
- *If you can't answer* something the board member asks you, let him/her know you'll find out more and follow up.

4) **Responding to the Board Member's Needs**

- *If the board member is supportive*, ask what more he/she could do to show support and move the issue forward (e.g., adding this topic to an upcoming school board meeting, speaking at an upcoming local event, connecting with other potential supporters).

- *If the board member needs more convincing,* ask what you can do to provide the information that he/she needs (e.g., bringing local experts or solar installers to talk to the board, doing research about an issue of concern, rallying more community support).

5) **Next Steps**

- *Set up any follow-up meetings or next steps.* Provide contact information for who is following up and clarify the expected response time.

- *Leave behind any supporting materials* that you want the board member to have.

- *Thank him/her* for the time and attention.

6) **Follow-Up**

- *Send a thank-you email* to the board member that also recaps the meeting.

- *Follow through* on any next steps discussed and state the expected response time.

Preparation Guide for a School Board Vote

PLANNING FOR THE VOTE:

- *Bring vocal and visible community support.* Board members should be hearing from parents, students, teachers, and other community stakeholders as the vote approaches. If you need to shore up votes, the board members who need to be moved should be actively asked to support the resolution. This is where petitions, sign-on letters, signs, stickers, and buttons that families can wear, as well as social media, emails, and calls, come in.
- *Assemble a strong turnout for the vote.* Develop a mini-campaign plan for the day/night of the vote. You'll want to pack the board chambers with parents, students, teachers, and community members who support the resolution. Identify a diverse array of supporters to prepare to speak in support of the resolution, and work with them in advance to ensure that your priority messages are all communicated.
- *Stay in close contact with your board champions.* Work with the board member(s) who will introduce the resolution to let them know what kind of turnout and testimony your advocacy team will be preparing for the night of the vote. It is important for them to know that when they introduce the campaign, they will have a powerful wave of support behind them.
- *Prepare your media and social media response plans.* Ensure that you have a press release drafted in advance for both "pass" and "fail" scenarios that is ready to be sent out after the vote. Try to include quotes from key stakeholders, particularly a student, parent, and/or teacher.

THE DAY OF THE VOTE:

- *By the day of the vote,* all of the campaign pieces you've set in motion should be ready to unfold. Send email and text reminders to your group and post on social media to ensure turnout.
- *When your topic comes up on the agenda*, make sure that you have a designated spokesperson from your team who can respond to any questions posed by board members or district staff. Also, it will be important to ensure that the appropriate school district facilities manager or sustainability director is prepared to favorably represent the campaign and answer any questions that board members may have.
- *Have appointed spokespeople*, including students, teachers, and parents, ready to speak at the meeting and to speak with the media. Be ready to share the vote outcome on social media as well.

AFTER A POSITIVE VOTE:

- *Celebrate!* Recognize your core team and supporters for their time, energy, and commitment.
- *Write thank-you letters* to the superintendent, the school board members, and key district staff to acknowledge their support and to let them know that your advocacy team looks forward to supporting the implementation phase that comes next.

IF THE VOTE DOESN'T GO YOUR WAY:

- *If, despite your best efforts* to ensure that you had lined up the votes, things somehow go awry, don't be discouraged. All the time and energy you've spent has been building momentum, and it's okay if you need to regroup for one more round.
- *Do your best during the meeting* to determine what aspects of the campaign were unacceptable to the board members who opposed it. You can follow up after the meeting to get more concrete feedback and guidance from board members as to what needs to change to get their support.
- *Meet with your team* to assess next steps in terms of gathering more data to support the benefits of the transition and to revise the commitment to appeal to a majority of the board voters.
- *Develop a plan to re-engage* with the board for a future vote.

ADDITIONAL RESOURCES

ORGANIZING

Sierra Club, *Movement Organizing Manual*, 2016
https://drive.google.com/file/d/0B_SyQm-xMDSpWFZKTUc4aGkoeWdKSkNfenBHb0U1dkZKRE8w/view.

Sierra Club, *Volunteer & Chapter Communications Handbook*, 2017
https://www.sierraclub.org/sites/www.sierraclub.org/files/uploads-wysiwig/comms-handbook-2017.pdf.

Southwest Network for Environmental and Economic Justice, *Jemez Principles for Democratic Organizing*, 1996, http://www.ejnet.org/ej/jemez.pdf.

U.S. Green Building Council, Center for Green Schools, *School Board Advocacy Toolkit*, 2018
https://www.centerforgreenschools.org/school-board-advocacy-toolkit

GROUP MANAGEMENT

Seeds for Change, *Skills for Working in Groups*
https://www.seedsforchange.org.uk/resources.

Tree Bressen's Group Facilitation Site, *Library*, https://treegroup.info/library/.

Vernal Project, *Papers on Cooperative Decision-Making*
http://www.vernalproject.org/papers/Process.html.

SOLAR POLICY

Center for the New Energy Economy, *State Policy Opportunity Tracker for Clean Energy*, https://spotforcleanenergy.org.

Database of State Incentives for Renewables & Efficiency (DSIRE) http://www.dsireusa.org.

Georgetown Climate Center, *State Energy Analysis Tool* https://www.georgetownclimate.org/clean-energy/sea.html.

Solar Power Rocks, *2018 State Solar Power Rankings Report*, 2018 https://www.solarpowerrocks.com/2018-state-solar-power-rankings.

GOAL SETTING

U.S. Environmental Protection Agency, *Guidance for Setting a Renewable Electricity Goal: A Framework to Help Municipalities Achieve Their Objectives*, 2018 https://www.epa.gov/sites/production/files/2018-08/documents/gpp-goal-setting-guidance.pdf.

RESOLUTIONS

Schools for Climate Action, *Sample Resolutions*, 2018 https://schoolsforclimateaction.weebly.com/resources.html.

SOLAR PROJECT DEVELOPMENT

National Renewable Energy Laboratory, *Writing Solar Requests for Proposals (RFPs): Lessons from NREL's University PV Implementation Assistance Program*, 2016, https://www.nrel.gov/docs/gen/fy16/66369.pdf.

Sun Power, *How to Write a Successful Solar RFP*, 2017 https://us.sunpower.com/sites/sunpower/files/sp-education-rfp-creation-sheet-rv1-may-2015_0.pdf.

The Solar Foundation, *Steps to a Successful Solar Request for Proposal*, 2017 https://mdvseia.org/wp-content/uploads/2017/02/Solar-Foundation_StepsToASuccessfulSolarRFP_Report_2015.pdf.

U.S. Environmental Protection Agency, *Solar Project Development Pathway & Resources*
https://www.epa.gov/repowertoolbox/solar-project-development-pathway-resources.

ENERGY EDUCATION

Clean Energy Bright Futures, *Resources for Teachers*
https://cebrightfutures.org/resources-teachers

Eco-Schools USA, National Wildlife Federation, *Energy and Climate Change Pathways to Sustainability*, 2015
https://www.nwf.org/Eco-Schools-USA/Our-Partners/Entergy/~/media/PDFs/Eco-schools/Entergy%20Curriculum/Entergy-PhaseII/Louisiana/Middle-Schools/Entergy_LA-MS-FINAL2015.pdf

Grid Alternatives, *Solar Futures Toolkit*, http://toolkit.solarfutures.org/

Let's Go Solar, *Solar kits, camps, projects, and resources for kids, teens, parents, and teachers*, https://www.letsgosolar.com

National Energy Education Development Project (NEED), *Energy curricula, resources, events, and trainings for educators*, https://www.NEED.org

REcharge Labs, *Solar Activity Ideas*
http://www.rechargelabs.org/activity-ideas/solar-activities

U.S. Department of Energy, *Online K-12 Learning Resources*
https://www.energy.gov/kindergarten-through-high-school

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2 International Energy Agency, "Renewables 2017," https://www.iea.org/publications/renewables2017; International Renewable Energy Agency, *Renewable Power Generation Costs in 2017* (Abu Dhabi: January 2018), http://www.irena.org/publications/2018/Jan/Renewable-power-generation-costs-in-2017; Ben Webster, "Solar is fastest growing source of new energy," *The Times* (U.K.), April 6, 2018, https://www.thetimes.co.uk/article/solar-is-fastest-growing-source-of-new-energy-qrf26r7lz.

3 The Solar Foundation, Generation 180, and SEIA, op. cit. note 1.

4 U.S. Environmental Protection Agency (EPA), State and Local Climate and Energy Program, *Energy Efficiency Programs in K-12 Schools: A Guide to Developing and Implementing Greenhouse Gas Reduction Programs* (Washington, DC: 2011), https://www.epa.gov/sites/production/files/2017-06/documents/k-12_guide.pdf.

5 U.S. Energy Information Administration (EIA), *Commercial Buildings Energy Consumption Survey (CBECS)*, Table PBA3 Sum of major fuel consumption totals and gross energy intensities by building activity subcategories, 2012, https://www.eia.gov/consumption/commercial/data/2012/c&e/cfm/pba3.php; EIA, *Monthly Energy Review*, December 2018, Table 12.3 Carbon dioxide emissions from energy consumption: commercial sector, https://www.eia.gov/totalenergy/data/monthly/pdf/sec12_6.pdf; EPA, Greenhouse Gas Equivalencies Calculator, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, updated December 2018. K-12 schools account for 7.7% of primary energy use in commercial buildings, or 536 trillion BTU out of 6,963 trillion BTU. Commercial building sector carbon dioxide (CO_2) emissions in 2012 were 932 million metric tons. By taking 7.7% of 932 million metric tons, then K-12 schools were responsible for 71.8 million metric tons of CO_2. This calculation assumes that: 1) K-12 schools have similar geographic distribution to all commercial buildings; and 2) K-12 schools' proportion of energy use among fuels (electricity, natural gas, oil) is roughly similar to the average of commercial buildings. 71.8 million metric tons of CO_2 equates to the emissions of 18.4 coal-fired power plants per year.

6 SEIA, database used for the report *Brighter Future: A Study on Solar in U.S. Schools*, op. cit. note 1.

7 The Solar Foundation, Generation 180, and SEIA, op. cit. note 1.

8 Ibid.

9 Ibid. The average solar school array size in 2017 was 301.2 kilowatts (kW) and the total number of U.S. K-12 schools was 125,589, from The Solar Foundation, Generation 180, and SEIA, op. cit. note 1. Multiplying these two numbers comes to 37.8 gigawatts (GW) of installed solar capacity on schools nationwide. Given that 1 megawatt of electricity powers approximately 1,164 average homes (SEIA, *What's in a Megawatt? Calculating the number of homes powered by solar energy*, https://www.seia.org/initiatives/whats-megawatt), then 37.8 GW powers approximately 6.2 million homes.

10 The Solar Foundation, *National Solar Jobs Census 2017* (Washington, DC: January 2018), https://www.thesolarfoundation.org/national.

11 See sources in endnote 5.

12 Erika Eitland et al., *Schools for Health: Foundations for Student Success* (Cambridge, MA: Harvard T.H. Chan School of Public Health, Healthy Buildings Program, 2017), http://schools.forhealth.org/Harvard.Schools_For_Health.Foundations_for_Student_Success.pdf.

13 Bryan Bollinger and Kenneth Gillingham, "Peer effects in the diffusion of solar photovoltaic panels," *Marketing Science*, Vol. 31, No. 6 (2012), pp. 900–912.

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16 Eric Bonnema et al., *Technical Feasibility Study for Zero Energy K-12 Schools* (Golden, CO: National Renewable Energy Laboratory, November 2016), https://www.nrel.gov/docs/fy17osti/67233.pdf.

17 Hydra Mendoza-McDonnell and Matt Haney, "Resolution No. 176-27AI in Support of Carbon Neutral Schools" (San Francisco, CA: San Francisco Unified School District, 2017), https://www.boarddocs.com/ca/sfusd/Board.nsf/files/ARET34754F0B/$file/176-27A1%20CARBON.pdf.

18 Rod Berger, "School district sustainability: Saving 'green' by going green," *Forbes*, May 15, 2017, https://www.forbes.com/sites/rodberger/2017/05/15/school-district-sustainability-saving-green-by-going-green/#3b6a46fa371e.

19 Frank Jossi, "Investment in solar grows dramatically in Minnesota schools," *Energy News Network*, November 14, 2017, https://energynews.us/midwest/investment-in-solar-grows-dramatically-in-minnesotas-k-12-schools/.

20 The Solar Foundation, Generation 180, and SEIA, op. cit. note 1.