

# SUNRISE OVER SCHOOLS



A SUMMARY OF FINDINGS FROM A REPORT ON DPS' SOLAR POTENTIAL

## THE REPORT

By NC Clean Energy  
Technology Center,  
NC State University

### Durham Public Schools Roadmap to 100% Renewable Electricity

[www.repowerourschools.com/report](http://www.repowerourschools.com/report)

Commissioned by  
the Repower Our  
Schools coalition.

## KEY FINDINGS

DPS currently spends  
\$5.7 million annually  
on electricity, about  
95%<sup>1</sup> of which is gener-  
ated by fossil fuels  
and nuclear power.

### DPS CAN BE POWERED BY 100% SOLAR ENERGY & SAVE MONEY TODAY

A conservative technical assessment shows that DPS can meet 100% of the district's electricity needs through on-site solar installations at schools. There are also many opportunities for off-site renewable energy projects. The "Partnership Flip" model is the best option currently available for DPS to install solar and maximize savings.



## CURRENT PLAN

### PARTNERSHIP FLIP WITH INVESTOR

The school and an investor form a partnership to build a grid-connected solar project. The role of the investor is to claim tax credits to lower the cost of the project since the school can't due to its nonprofit status. The school can obtain sole ownership of the solar project after about 7 years of joint ownership with the investor, at which time the partnership 'flips.' All the electricity produced by the solar project is sold to the utility for revenue (i.e., sell all).

### HOW MUCH CAN DPS SAVE BY GOING SOLAR?

# \$12.5 MILLION

Over 25 years or 9% savings<sup>2</sup>



or



or



Savings over 25 years for 100% solar district-wide with \$1.50/watt turnkey solar PV installations. Calculations based on \$39,375 starting annual teacher salaries; \$400 per tablet; \$60 per textbook.



## ASSESSMENT

The Partnership Flip model allows the school to acquire the solar project at a greatly reduced cost at a future date. DPS can also own and retire the renewable energy credits (RECs) and thus legally claim to be powered by renewable energy. Unfortunately, complicated administrative and legal agreements are required, and up-front capital investment may be necessary from the school.

# STRENGTHENING SOLAR POLICIES IN NC COULD INCREASE SAVINGS FOR DPS

If third party energy sales become legal and net metering policies improve,  
**DPS could save even more money on electricity costs with solar**

## FUTURE PLAN

### POWER PURCHASE AGREEMENT (PPA) WITH THIRD PARTY OWNER

A third party (e.g., solar company) owns a grid-connected solar project and sells the electricity generated directly back to the school under a long-term power purchase agreement. This simple arrangement requires no up-front costs to the school, and the third party owner passes on the savings from claiming the tax credit. If the solar project produces more electricity than is used by the school in a month, the excess electricity is credited to the school on its next utility bill (i.e., net metered).

## HOW MUCH CAN DPS SAVE BY GOING SOLAR?

# \$16.3 MILLION

Over 25 years or 11% savings<sup>2</sup>



Savings over 25 years for 100% solar district-wide with \$1.50/watt turnkey solar PV installations. Calculations based on \$39,375 starting annual teacher salaries; \$400 per tablet; \$60 per textbook.

## ASSESSMENT

Third party energy sales is the most common financing structure used by schools in the 25 states where it is available. It offers price stability through a long-term contract for electricity. DPS can also own and retire the renewable energy credits (RECs) and thus legally claim to be powered by renewable energy.

**UNFORTUNATELY, THIS OPTION IS NOT CURRENTLY LEGAL IN NORTH CAROLINA.**

## NEXT STEPS



**TO GET INVOLVED**  
[REPOWEROURSCHOOLS.COM](http://REPOWEROURSCHOOLS.COM)

- **Continue energy efficiency improvements in existing schools, and design all new school buildings to be net-zero energy,** meaning they use less energy than the building produces.

- **Start now. Invest in solar to power a group of schools.** Several commercial-scale projects could power multiple DPS schools with 100% solar electricity and save the district money today.

- **Develop a long-term energy plan for 100% renewable electricity.** Achieving 100% renewable electricity will take strong school board leadership. Solar saves money, protects our children's health & prepares students for jobs in science, technology, engineering, and math (STEM).

<sup>1</sup> <http://www.duke-energy.com/pdfs/Q4-2014Stat-Supplement.pdf>

<sup>2</sup> Estimated savings is calculated for DPS' total electricity needs at current pricing for solar farms or rooftop systems' pricing within 5 years (\$1.50/watt turnkey solar PV installations) in comparison to projected costs should the district continue to purchase electricity from their utility without any solar installations.