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FOR
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PENNSYLVANIA

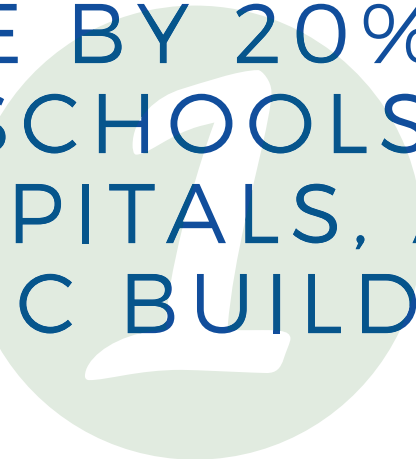
A PROPOSAL TO REACH 10% OF THE
CLEAN POWER PLAN TARGET BY
REDUCING ENERGY USE BY 20%
IN PA'S SCHOOLS, HOSPITALS, AND
PUBLIC BUILDINGS



68,000
GWH

Estimated lifecycle energy savings when assuming average effective useful life (EUL) of equipment is 12 years.

REDUCE ENERGY USE BY 20% IN SCHOOLS, HOSPITALS, AND PUBLIC BUILDINGS



29,000
JOBS

Estimated direct jobs (in job years) created from 2016 to 2030. This does not include indirect and induced jobs. 2/3 of these jobs are blue collar.

SUPPORT GOOD JOBS WITH FAMILY-SUPPORTING WAGES AND BENEFITS



\$5.1 BIL
SAVINGS

Estimated consumer energy bill savings of \$5.1 billion from 2016 to-2030 assuming 1 percent annual increase in commercial rates.

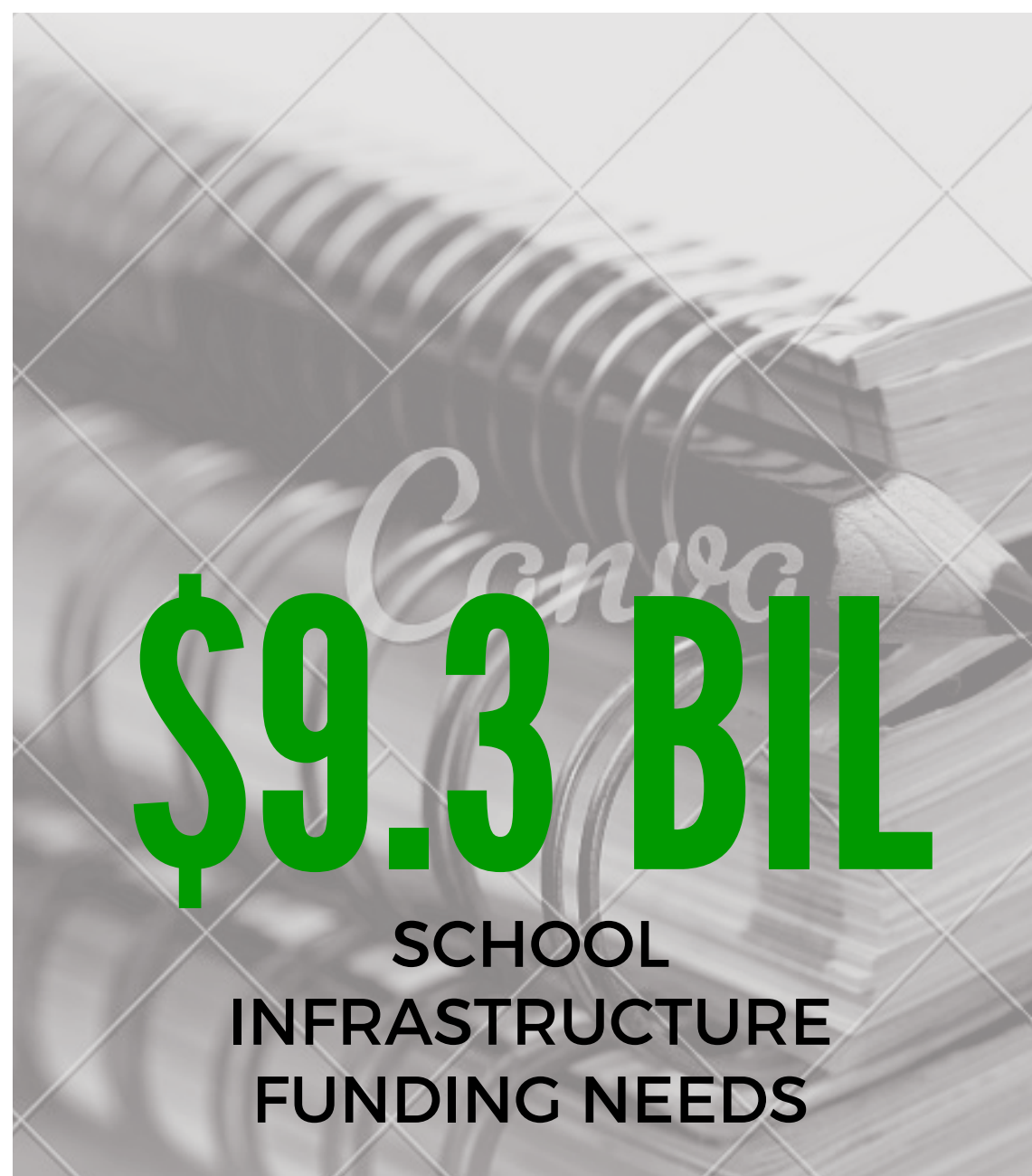
MEET 10% OF PENNSYLVANIA'S CLEAN POWER PLAN GOAL WITH SIGNIFICANT COST SAVINGS



50%

ENERGY EFFICIENCY EQUIPMENT TYPICALLY SOURCED LOCALLY

Source: U.S. EPA



\$9.3 BIL

SCHOOL INFRASTRUCTURE FUNDING NEEDS

Source: ASCE



>10%

SHARE OF MUNICIPAL BUDGETS SPENT ON ENERGY

Source: U.S. EPA

SUPPORT JOBS IN THE LOCAL ECONOMY



IMPROVE CONDITIONS OF PENNSYLVANIA'S SCHOOL AND HOSPITAL FACILITIES



REDUCE WASTE IN MUNICIPAL BUDGETS



Menu of Financing Options

Pennsylvania can leverage and build on its progress to date to meet a 20 percent reduction in school, hospital, and public building energy use. In 2015, Pennsylvania adopted Phase III of its energy efficiency program, setting savings targets for each utility of 2.6 to 5 percent cumulative savings by 2020. Act 129 limits utility spending on efficiency programs to 2 percent of 2006 annual revenues. Financial resources, such as those described below, can augment utility spending and direct more resources to the M.U.S.H. sector to realize long-lasting and cost-effective energy savings with significant public benefits.

- **Green Banks** encourage private sector investment in energy efficiency and renewable energy, reducing the need for public subsidies. The Union of Concerned Scientists (UCS) has analyzed a potential green bank in Pennsylvania finding that it could leverage an initial capitalization of \$135 million into a \$4.2 billion investment over the next 15 years. Pennsylvania's Keystone HELP and Green Energy Loan Fund could be expanded through a centralized Green Bank. Kentucky, Pennsylvania, and Iowa are some states that have successfully operated green banks for energy efficiency.
- **Bonds** raise private revenue that can be used to finance energy improvement projects. Conventionally used for infrastructure construction, various bonding options exist for energy efficiency. For example: (1) General obligation (GO) and revenue bonds include tax-exempt interest rates, (2) Qualified Energy Conservation Bonds are subsidized by the federal government and potentially offer even lower interest rates.
- **Close tax loopholes** - The California Clean Energy Jobs Act (Proposition 39) amended the corporate income tax code to close a tax loophole. Projected revenue is allocated both to the General Fund and the Clean Energy Job Creation Fund for five years. This measure makes up to \$550 million annually available for eligible projects to implement renewable energy generation and energy efficiency in schools.
- **On-bill financing** leverages the relationship between consumers and their utility providers to access funding for energy improvements. It allows customers to invest in energy efficiency retrofits or upgrades and pay back the cost through charges on their utility bills.
- **CPP allowance revenue** - In a mass-based plan, states can sell or auction off allowances and use the revenue to fund the proposed program.
- **Emission Rate Credit (ERCs)** - In a rate-based plan, states can qualify school and hospital efficiency projects to generate ERCs, which can be sold to power plants with compliance targets.
- **Federal funding** for energy efficiency is sometimes available through block grants, such as occurred under the American Recovery and Reinvestment Act. Numerous programs have tailored grants and loan assistance to schools, including ENERGY STAR for K-12 schools, EnergySmart School, the Healthy School Environments program, the Local Climate and Energy Program, State Climate and Energy Program, and Qualified Zone Academy Bonds from the U.S. Department of Education.

Summary

This proposal recommends the implementation of a comprehensive program to achieve deep levels of energy efficiency in Pennsylvania's schools, hospitals, and other public buildings (also known as the M.U.S.H. sector for Municipal Buildings, Universities, Schools, and Hospitals) as 10 percent of compliance toward the Clean Power Plan (CPP).

This program can be part of a mass-based or rate-based implementation plan. In a mass-based approach, efficiency counts toward CPP compliance because it displaces fossil fuel emissions. States can support energy efficiency goals by allocating emission allowances to efficiency programs or by using revenue from an allowance auction to directly fund such programs. Under a rate-based approach energy efficiency measures implemented under a statewide program can receive emission rate credits (ERCs) for megawatt hour (MWh) savings. These ERCs can be applied toward adjusting a CO2 emission rate during the CPP compliance period. Under either approach, achieving 20 percent reduction in electricity use in schools, hospitals, and other public buildings (from a 2012 baseline) would achieve 10 percent of Pennsylvania's Clean Power Plan goal.

The money saved in reduced energy bills over the lifetime of the energy efficiency retrofits savings in the M.U.S.H. sector could be reinvested in education, health care, and public services for Pennsylvania residents.

An aggressive program to reduce energy use in Pennsylvania's schools and hospitals would also create good jobs with family supporting wages and benefits. A school and hospital energy efficiency program could provide jobs for workers vulnerable to layoffs in power plants as well as new workers seeking a stable career in the green economy. In addition, the program can support training and education for existing building staff, engaging custodial staff and other building workers in the energy savings opportunities right at their fingertips.

FOR MORE INFORMATION:



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