

Poughkeepsie Day School Solar Array FAQs

Poughkeepsie Day School (PDS) has signed a contract with new business partner Dynamic Energy for a 500KW (kilowatt), approximate 3 acre, solar array valued at approximately \$1,000,000. The array will generate 737 KWH (kilowatt hours) over one year. There is no up-front investment by PDS but the school will purchase energy generated from the solar contractor for 20 years at a fixed price. The installation of this solar array is a sound financial decision that will save the school approximately \$223,245 over 20 years. Click [here](#) to view a spreadsheet with the costs/projected savings/usage for 20 years, with totals along the bottom.

Where will the array be located?

The location of the array was decided after an extraordinarily thoughtful process involving functionality, cost and aesthetics. Despite having a 34 acre campus, there are many limitations on where we can place an array. The Eastern boundary of the school cannot be used due to the grade of the land. Placing the array on the Western edge (Boardman Road) would require the removal of trees and be aesthetically unappealing. Installing the array at the intersection of Boardman and Spackenkill Roads would require over 2000' of heavy cable, at about \$50/ft, or about \$100,000.

After much thought, the decision was made to install the array at the Northeastern corner of the campus (behind Gilkeson Center), which will involve the removal of some trees.

One of the most important issues facing us as a society is global warming - in fact it may be the most important one of all. By installing a solar array, we can reduce our carbon footprint by 60-70%.

How much will it cost Dynamic Energy to install our array?

Installing a solar array costs between \$2.50/3/watt. Ours will be 500KW, or 500,000 watts, or about \$1,200,000-\$1,500,000.

If there is no upfront cost, how does Dynamic Energy make money from this endeavor?

Dynamic Energy will receive federal and state investment tax credits. These credits will effectively lower the price by about 40%, or approximately \$600,000-700,000, allowing a profit of as much as \$500,000 or more.

The price of oil has been dropping. Why do we think electricity will continue to rise in price?

While electricity may continue to drop in price, based on the daily price of natural gas (this topic is a separate thesis, and one needs to trust this fact), the cost of having electricity in a building has more components than just energy. It involves the delivery cost and demand surcharges, and also purchasing electricity on the open market. A very sobering data point is

that the cost of transmission has gone up 30% in the past 7 years. Only about 30-40% of an electric bill is the cost of the power, the rest is transmission and taxes. With solar we pay no transmission costs, taxes or demand surcharges.

What are the financial risks to PDS?

The risk is limited to the combined price of energy (electricity, delivery/demand charges) dropping below the contracted price. The likelihood of this would appear small. Please see the excerpts from [Forbes magazine](#) and study the trends on the [NYISO website](#) (acronym explained below). Since the system requires basically no maintenance, even if the solar company goes out of business, the servicing of it can be handled by a local provider and then deducted from the annual contract payment. And since no real maintenance is needed, again, the risk is small that there would be a major system failure that cannot be repaired easily and simply. Dynamic Energy has a financial incentive to make sure that the array is in full working condition at all times – they do not get paid by PDS if it is not.

NYISO

The New York Independent System Operator (NYISO) is at the heart of New York State's electric system, operating the high-voltage transmission network, administering and monitoring the wholesale electricity markets, and planning for the state's energy future.