

Pure Solar Technologies

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Pure Solar Technologies is a company based out of Thurston country in Washington State whose objective it is to supply a rapidly expanding market. Pure Solar aims to be a sort of one-stop-shop in terms of designing, manufacturing, building and, installing different forms of photovoltaic solar units. Pure Solar is a young company, establishing its legs, however, as a start-up from Evergreen's Entrepreneurship and Power program. The company has grown steadily as successful design and competitive prices mixed with an ever expanding knowledge of the products offered began coalescing. Pure Solar Technologies has aimed to focus its efforts on providing affordable, durable, efficient, competitive and most importantly, generative innovations to a public intent on lowering their cumulative demand for the consumption of fossil fuels.

Steven B. Reeves, the CTO (chief technology officer) of Pure Solar Technologies has been designing and constructing custom conformal photovoltaic laminates and surfaces since 1993, which are now offered as a standard product from the company. With the intention of providing readily accessible energy to as

many people as possible, primarily larger energy consumers such as businesses, apartment buildings and grocery stores, Pure Solar works with the layout of your building, offering a wide variety of surface sizes, solar cells and cell orientations. Standard photovoltaic solar modules are big black roof attachments, which are unsightly to some. Pure Solar Technologies, however, is well equipped to work around them.

Pure Solar Technologies offers more than a simple way to generate electricity for buildings, apartments, businesses or homes. They have also revolutionized the market by offering specialized attachments, customizing the design to operate with any type of machine or gadget so that it is effectively hooked up to a private solar grid. Various types of solar cells and attachments are offered for any electrical device one may wish to have powered by electricity generated from outside the 'grid', and instead from the electricity harnessed from one's own source. Offered in a wide variety of shapes and sizes, Pure Solar Technologies is becoming ever more equipped to accommodate structures of various sizes, expanding beyond the suburban home and small business to much larger operations requiring more materials and expertise.

Aiming to not just meet, but exceed requirements and expectations, Pure Solar Technologies prides itself on advanced quality control. Due to the fact that this type of business requires many different types of high technology equipment, quality control can be both a blessing and a curse. While attempting to offer only the very best possible materials, designs and installation, a fledgling company such

as this could quickly find itself with growing mountains of expenses and debt, while merely hoping that its products adequately entice consumers into helping satisfy the companies creditors. Pure Solar Technologies has taken incremental steps towards its current status, offering an expanding repertoire of services, while making sure that its existing products and services held their initial exemplary status. Pure Solar has augmented the standard view of solar photovoltaic power, encouraging a more durable product requiring lower maintenance costs while offering an unprecedented amount of energy.

With the goal of offering the best quality, longest lasting and most efficient solar modules the market has to offer, much is required of Pure Solar Technologies. Because design can only take a company so far, it is Pure Solar Technologies' obligation to create morally praise worthy business models in which they research the best possible materials they can use for their products, while at the same time offering prices that will allow the company to survive. This is a dangerous line for any company (especially one in relative infancy) to tip toe, as the success of its product line may not reflect the cost of producing that same line of products. While keeping the business afloat, Pure Solar Technologies has focused much of its efforts on quality control. This can be seen in a number of different examples, such as: sourcing maximally efficient solar cells to ensure longevity and power output, using the highest quality glass and glass coatings which minimize power loss (a serious disadvantage of lower quality materials), lifetime superior encapsulants, which are designed to surpass lifetimes of commodity level modules, allowing entire solar units to function substantially longer than many others, who's parts are designed for

initial output and function rather than longevity. Along with this, Pure Solar Technologies has also planned for the future by making their junction boxes ‘future-proof’, allowing for future customization as needed. Planned obsolescence is not a business model embraced by Pure Solar Technologies, and as such, has created a diverse array of premium, long-lasting, products available for both homes and businesses.

Already having forged not just a functioning, but a fruitful enterprise, Pure Solar Technologies aims to improve its existing products and services by focusing its efforts on a number of areas ranging from quicker Photovoltaic (PV) array design, faster installation and visually appealing final installments. The primary expense with current solar units is the cost of installment, which Pure Solar Technologies is aiming to decrease. At the same time that they are forming methods to lower installment fees, Pure Solar Technologies is also focusing much of its efforts on PV aesthetics, allowing the company to implement solar designs and modules to a much more diverse array of locations and surfaces. Pure Solar Technologies has also begun implementing ‘smart’ modules, in which the user can access ‘health reports’ for each module in order to ascertain their overall function and productivity. This is a way to better understand the efficiency of each component of a solar set-up, helping to keep maintenance costs down and productivity up.

With a vague air of messianic determination, Pure Solar Technologies owners Steeve Reeves and Richard Phillips describe the basic existence of the company as a vision “to turn building surfaces into distributed power plants, empowering energy

independence, cost savings, and freedom from the uncertainties of long-term energy costs. Pure Solar is positioned at the confluence of rising population, energy demand, rising prices, a growing worldwide disillusionment with nuclear power, and the increasingly affordable cost of solar PV power. As these forces play out, we expect that our innovation will command a strong presence in one of the hottest industries of the next couple of decades.”

Pure Solar Technologies operates within the redirect outlined by the Northwest’s Sustainable Energy for Economic Development (SEED) initiative, who’s goal it is “to establish a clean, diverse, and affordable Northwest energy system based on efficient use of renewable resources with maximum local control and ownership of energy assets. Working collaboratively with motivated communities, Northwest SEED researches and implements clean energy solutions that provide economic benefits while creating a healthy and secure energy future. As part of this same initiative, SEED also offers extra incentives for community-based solar projects. “In 2009, the passage of Washington SB 6170 extended the production incentive program to Community Solar projects. Community solar projects are defined as solar energy systems owned by local individuals, households, nonprofit organizations, or non-utility businesses that are placed on local government property; or utility-owned systems funded voluntarily by ratepayers in exchange for a payment or utility credit for electricity produced. The incentive payments for community solar participants, starting with a higher base rate and using the same multipliers as mentioned above for Washington-made equipment components, range from \$.30 to \$1.08 per kilowatt-hour. Each participant in the community solar

project can apply to receive this incentive and may receive up to \$5,000 per year.”

Generating further incentive by noting that all “equipment used to generate solar electricity and the labor and services required to install these systems are exempt from sales tax in Washington State,” spurring much larger incentives for homeowners, business owners as well as larger companies and corporations.

Sources Cited:

Booneville Environmental Foundation: The Northwest Community Solar Guide.

Sustainable Energy for Economic Development. www.b-e-f.org

Pure Solar Technologies. <http://www.puresolar.us/home>