



going green



When “going green” and “car wash” were used in the same sentence 10 years ago, the subject almost always turned to water - use, reuse and treatment. In the past, discussions focused on “drive way” washing and the toxic soup of untreated water that ends up in the sewer that follows the same route as storm water runoff to end up in the closest lake or river. The problem is that car dirt is not ordinary dirt; it’s a mixture of exhaust fumes, gasoline and motor oil mixed with lubricants, tar, suspended matter, heavy metals, hydrocarbons and micro-organisms. Add the surfactants in the soap that make it rinse off easily and you have quite a mix of chemicals. Most commercial car wash operators have learned to self-promote about pollution elimination and water savings by patronizing a commercial car wash; on average, these operations use at least 30 percent less water and the rinse water is not allowed to run down into the storm drains unless it’s been treated as wastewater.

Less passé than discussing water effluent from drive way washing as point source pollution, but still relatively pedestrian, is water recycling or water reclamation. For years, water reclamation was a concern for drought prone states and regions. It was that guy’s problem - you know, the one from Arizona that the guy from Alamogordo introduced you to while you were in line at the early bird breakfast buffet. Not anymore, it is everyone’s ~~problem~~ opportunity. If you have not yet been the unwitting recipient of a six figure sewer tap fee, or a double digit increase in supply cost or discharge rate, you soon will be. Last time I checked, they weren’t making anymore water here on earth. Now, almost all operators that can fog a mirror are considering water reclamation as a ‘no-brainer” 2-3 year return on investment to preserve profit margins now and into the future.

So where does the conversation of our forward thinking, progressive, tree hugger type kind of operators focus now when talking about what it means to go green. Well, “going green” is a completely integrated concept best described using buzz words like sustainability, margin preservation, best practices, emerging technology, and viability - both business and ecosystem. No longer is the conversation about going green politically motivated or rooted in one region over another. Now, it is not only an industry imperative to embrace sustainable business practices to shape friendly governmental regulations for our industry, but also has become an economic reality to invest in eco-friendly car wash technology to maintain reasonable profit margins.

Today, there are three, main stream, well know, deployable technologies that allow car washes to go green: Water Reclamation, already discussed above (to learn more, go to www.purclean.com), Intelligent Motor Control and High Efficiency Water Heaters.

Motor control is required in every car wash to start up three phase motors like the dryer fan motors, the hydraulic power pack pump motor and the air compressor. The motor control panel for a wash is normally purchased locally from an electrical supply company. Since the electrical supply company is not a car wash expert, and since most operators do not know any better, car washes are typically equipped with direct-on-line (DOL) motor starters. Most operators chose cross the line (XL) motor control

Because they have the lowest capital acquisition cost of the various motor control options. However, using XL motor control is penny wise and pound foolish. Overtime, the operational costs will far exceed the up front savings. Intelligent motor control, on the other hand, recommends upgrading the starter devices to variable frequency drives (VFD) where a return on investment can be achieved in 3 years or less on the difference between the cheapest option and the smart option. Drives can change the speed of the motor in cycle as the work required changes. As such, a VFD will deliver run time energy savings by reducing motor speed to match demand. Dramatic Savings of 20%-60% on vacuum and dryer electrical cost is the result. To a large degree, intelligent motor control is catching up to water reclamation as another “no-brainer” investment to help stave off increasing utility costs and preserve margin structure all the while taking care of the environment by reducing a car wash’s carbon footprint. Learn more at www.carwashcmi.com.

High Efficiency Water Heaters are used to heat water for optimal cleaning at professional car washes across the country and to heat concrete aprons, outdoor areas and bays at car washes in the northern states. They were introduced in response to the energy crisis of the seventies. Most first generation high efficiency boilers were simply standard units that had been hurriedly modified to boost efficiency. These boilers obtained higher efficiencies by permitting steady-state condensation in the combustion chamber. Failure to adequately protect the combustion chamber and heat exchanger from the corrosive effects of condensate meant that most first generation units failed prematurely. After two decades of trial-and-error, the boiler industry has finally realized that high efficiency and long product life can only be obtained by preventing condensation from occurring in the combustion chamber. The Ultra-high efficiency water heater is now a reality. Fuel burn efficiency has now reached the high 90% range as compared to mid seventies for regular boilers. The savings in gas provides a two year return on investment for the additional up front cost of buying high efficiency wate heaters.

The most crafty and creative of our innovators and tinkers have moved on to integrate even more cutting edge green technology that will likely become mainstays in the car wash industry of tomorrow. Things like LEEDS Certified Buildings; The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council, provides a suite of standards for environmentally sustainable construction. All kinds of interesting concepts are coming out of LEEDS certified building practices like rain water catch basins engineered to drain the entire site into underground storage cisterns, photovoltaic roof panels and wind turbines to offset energy consumption, recycled plastic wall coverings, LED light source for domestic lighting as well as promotional signs, and many others.

The breakdown of going green is simple. It’s not only good for our earth, it’s good for car washers’ bank accounts. Stay in the black by going green.