Verdant Maintenance Control LLC
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Hello,

I-beams create an unusual problem for mowing and vegetation management. The way that the I-beams are designed creates an extremely difficult and labor-intensive process to keep grass and weeds from growing around them, along with the added difficulty of mowers being unable to get close to the beam. On the I-beam itself, the indented area has to be addressed by hand or a weed whip, which requires hours of resources. With these challenges in mind, a vegetation specialist who has countless hours in the vegetation management of solar arrays and a Cad Engineer, designed, what we think is a very simple, durable, cost-effective solution.

Our U.S. Patent Pending 24" disk, as you can see, surrounds the I-beam in a way that grass and weeds cannot grow near the beam. The disks also feature a dome shape that prevents water from pooling around the I-beam itself and sheds water away from the beam. The disks are made from HDPE 100% recycled plastic that will last for 40+ years. They can withstand being stepped on and run over with the wheels of a mower, making mowing around the beam much faster and safer. Once the disks are installed, they eliminate the need for weed-whipping around the base of the I-beam. There is no maintenance involved with the disks and they are resistant to any chemical vegetation spray you may use.

In testing the disks at a solar facility has shown that the time it takes to complete mowing vegetation management efforts will be lowered by a minimum of 20%, and there will be none of the huge labor costs associated with the prior requirement of weed whipping the poles. The cost savings by not having to weed whip the beams alone will pay for the costs of the disks in less than 2 years and the savings will continue to last for the full 25+ years of the site. Two side benefits we discovered in testing is when keeping the weeds down at the area of the poles, it will also help with ground faults in the mornings due to moisture on grass and weeds in those areas. The other additional advantage of the Weed Blocker Disks is corrosion protection. 95% of the I-beams at a solar facility are galvanized steel beams that hold up either the tracker system or fixed panels. The I-beams are installed anywhere from 8'-15' underground. After speaking with engineers on the construction of the I-beams, they state that they are designed to hopefully provide 30 years of strength to support the solar array in the projected terrain they are used in. One of the biggest issues for the poles is corrosion at the point where it enters the ground. Weeds and grass around the I-beams cause the beam to corrode at a faster rate than designed. Our Weed Blocker's domed design helps to direct the flow of water away from the I-beam, and helps prevent water from running down the beam underground. With no grass and weeds growing next to the I-beam, this effectively lowers the corrosion rate. With a Weed Blocker Disk installed, we predict that the solar arrays I-beams will last well over the 30 and 40-year life-spans projected by the construction engineers.

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The average cost of an I-beam at a solar array is around $110-$160, depending on the length. The cost of a Weed Blocker disk is less than 8% of the cost of an I-Beam. We urge you to consider viewing the Weed Blocker Disks as an “insurance policy” to ensure the I-beams last the entirety of the time they were designed for, help with ground faults that may keep your site from coming on in the mornings with excessive moisture, plus more.

We have designed the disk for extremely easy installation. No tools are necessary. Both halves of the disk are the same. Take two halves of a disk, turn at 180° to themselves, line up the insertion tabs around the I-beam and snap the disk together and then push down the ground. Note that the disks are designed NOT to come apart. Once snapped onto an I-beam, they will have to be cut or destroyed to remove. In the unlikely event you did damage a disk, replacement is as simple as snapping on a new disk.

In conclusion, we have designed an affordable weed prevention disk that greatly lowers vegetation management costs for the life of the solar array. Additionally, they help with corrosion on the I-beams themselves, and help with ground faults.

We hope that you are interested in installing our Weed Blocker disks on your existing solar arrays as well as your new projects. Have your EPC and O&M contractors meet with us to get an estimate of cost for a full set of disks for your next project or existing solar facility.

Thank you,

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