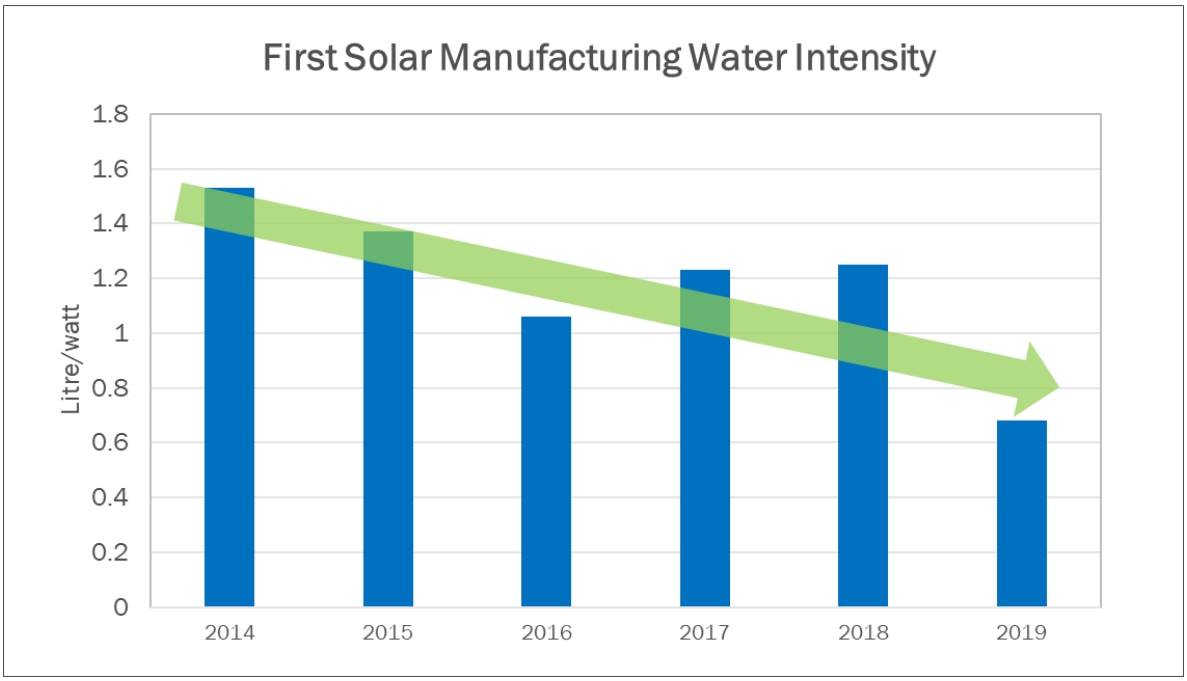
FIRST SOLAR – WATER USAGE REDUCTION INITIATIVES

Since 2009, First Solar has decreased the manufacturing water intensity (water consumption per watt produced) by 64%. This is due to significant improvements in module efficiency, manufacturing throughput, and the implementation of water conservation and recycling projects in our manufacturing and recycling operations.

In 2019, First Solar's manufacturing water intensity decreased by ~46% due to the increased throughput and efficiency of our Series 6 manufacturing process and water recycling initiatives. Whist production more than doubled, absolute water withdrawals only increased by ~14%. Totaling to ~300 million liters of water saved in 2019, equivalent to 7% of First Solar's absolute water use.



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ZERO WASTEWATER DISCHARGE - EVAPORATOR SYSTEM

Since 2018, all routinely operated First Solar recycling facilities in the U.S., Germany, Malaysia, and Vietnam generate zero wastewater discharge under normal operations. Instead, the wastewater is recycled and converted into freshwater, and reused in the recycling process.

Diagram 1: First Solar (Malaysia) Sdn Bhd - Recycling Facilities Evaporator System

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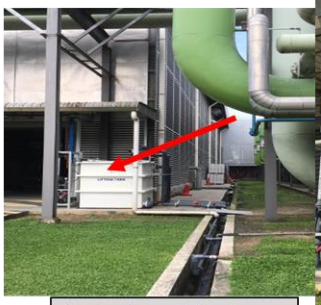
WATER CONSERVATION INITIATIVES – RO REJECT RECLAIM & RAIN WATER HARVESTING

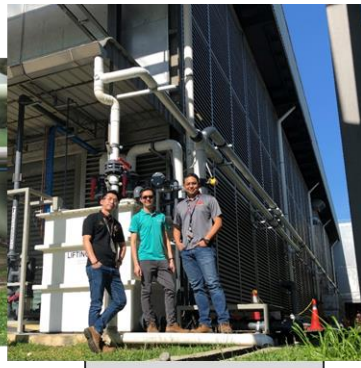
At the First Solar Malaysia manufacturing facility, some water conservation initiatives in place include Reverse Osmosis (RO) Reject Reclaiming, rainwater harvesting and Cooling Tower blowdown reclaiming. These initiatives reduce the raw water pull from SADA by 17%. In 2018, 60 Olympic swimming pools of water (150,000 m^3) were saved. This equals a cumulative amount of 192 Olympic size pools (> 480,000 m^3) of water saved since 2017. Aligning with our global sustainability goal with natural resource conservation and effluent discharge minimization.

KMT1 RO Reject Reclaimed System

KMT2 RO Reject Reclaimed System



Cooling Tower blowdown Reclaimed System



Rain Water Harvesting

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