



Case Study: Safe and Efficient Floating Solar Systems with Tigo MLPE

Today, tens of thousands of floating solar panels are equipped with Tigo MLPE for Safety and overall higher ROI via mismatch mitigation and efficient maintenance.

- System Sizes: 50kW – 6.5MW, and expanding
- Tigo Products: TS4-R-S, TS4-A-S (Safety and Monitoring)
- TS4-O, TS4-A-O (Optimization, Safety and Monitoring)
- CCA (universal datalogger)
- TS4-A-F (Safety only)
- RSS Transmitter (For activation of Safety with TS4-A-F)

The Challenge

Mitigating Electric Shock Hazard

When discussing electricity generation over water, risk of electrocution is a primary concern. In case of a short in the system, high tides or extreme weather, the water can be charged with great potential energy that poses a serious risk to service personnel. The only way to prevent systems from constantly energizing the water is by extinguishing the source utilizing module-level shutdown. String- or inverter- level shutdown solutions will be inadequate for the majority of faults of this nature.

Increasing ROI

To increase income of a floating system, a set of mismatch factors need to be dealt with to increase production. Seawater dust and soiling, cloud coverage, seabird droppings, and uneven tilts and azimuths due to fluctuation of the water surface cause significant power loss. Module-level optimization helps mitigate and recover the potential energy lost.

Reducing Costs

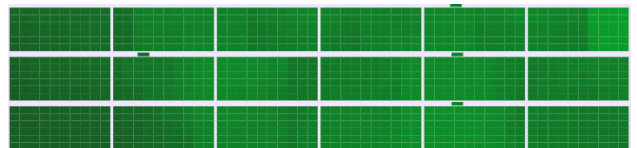
Module-level monitoring provides an unparalleled visibility to the system health. By doing so it helps the stakeholders reduce maintenance costs while maintaining performance utilizing intelligent alerts and notifications.

The Solution

With Tigo's **TS4** a variety of floating PV systems are now **safe** and **efficient**.

Eliminating power losses utilizing PIV technology, validated using Tigo's unique **Reclaimed Energy** feature that shows owners exactly how much Tigo is generating for them.

The TS4 units are also equipped with **Short Circuit Protection**: detecting, protecting, and resuming power once it's safe.



Exposure to clouds leads to severe mismatch. Thanks to Tigo TS4-O (Optimization) on a day like this the system produces ~15-20% more energy.



Tigo TS4, whether PV module integrated or add-on, are non-metallic and do not require any special grounding. Therefore, they simplify the installation by providing additional features with practically no additional work when mounting.

To Learn More Contact sales@TigoEnergy.com

DID YOU KNOW? Tigo TS4 units are **IP68** rated. This guarantees protection in water up to 1.5m deep, a critical characteristic in stormy conditions, abnormal high tides, or temporary submersion.