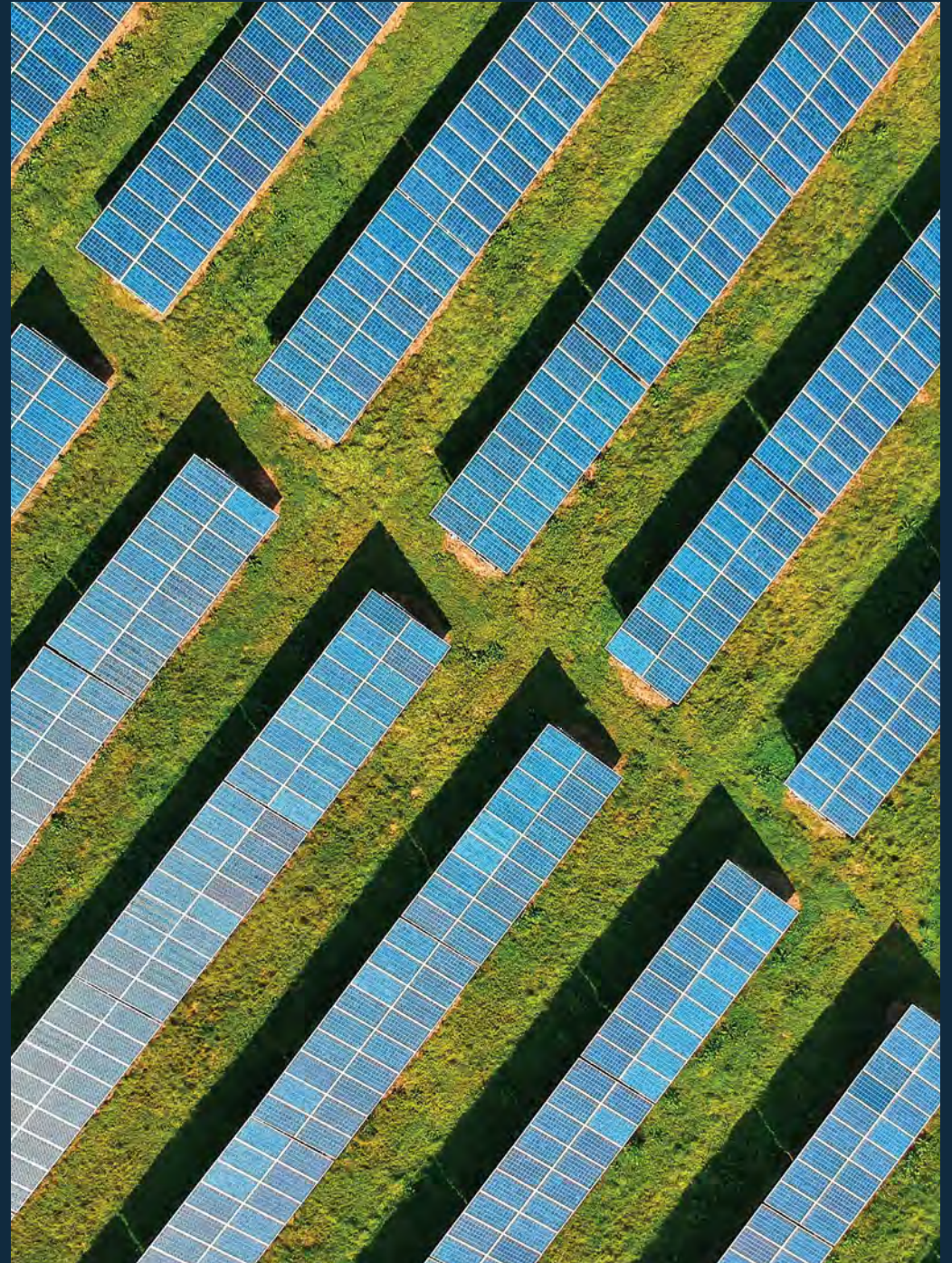




Geosynthetic solutions for the renewable energy industry



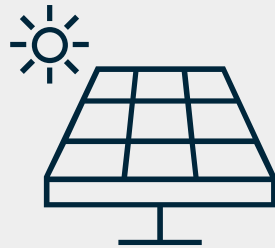
Advancements in the renewable energy sector are more prominent than ever. Geosynthetics play a pivotal role in the construction and longevity of renewable energy facilities.



WHERE INNOVATION MEETS SUSTAINABILITY

As the global demand for clean energy solutions continues to rise, the need for robust, environmentally conscious construction practices has never been more critical. The use of geosynthetics in renewable energy constructions can help create facilities that are economically feasible and environmentally friendly. In these applications, geotextiles can reduce cost, increase performance life, and minimize carbon footprint.

Solmax offers geosynthetic solutions to support a range of applications within the construction of renewable energy sites including solar and wind farms and hydroelectric power plants.



Solar Energy



Wind Energy



Hydroelectric Energy

Together, let us build infrastructure where clean energy and sustainable practices go hand in hand, powered by the strength and resilience of geosynthetics.

Solar and wind farms are often built in areas with poor soil conditions, weak subgrades and access challenges. However, these sites require access roads that can handle heavy loads such as wind turbines and pile driving equipment.



STABILIZE ACCESS ROADS AND WORKING PLATFORMS FOR LONG-TERM PERFORMANCE

The long-term stabilization of these access roads is critical during construction and operation. High strength geotextiles with moisture management capabilities are a cost-effective solution to increase performance in these applications reduce aggregate by up to 60%.

MIRAFI® H₂Ri and **MIRAFI RSi-Series** offer a single solution for roadway reinforcement and stabilization providing moisture management, soil reinforcement, confinement, separation and filtration with one single product.

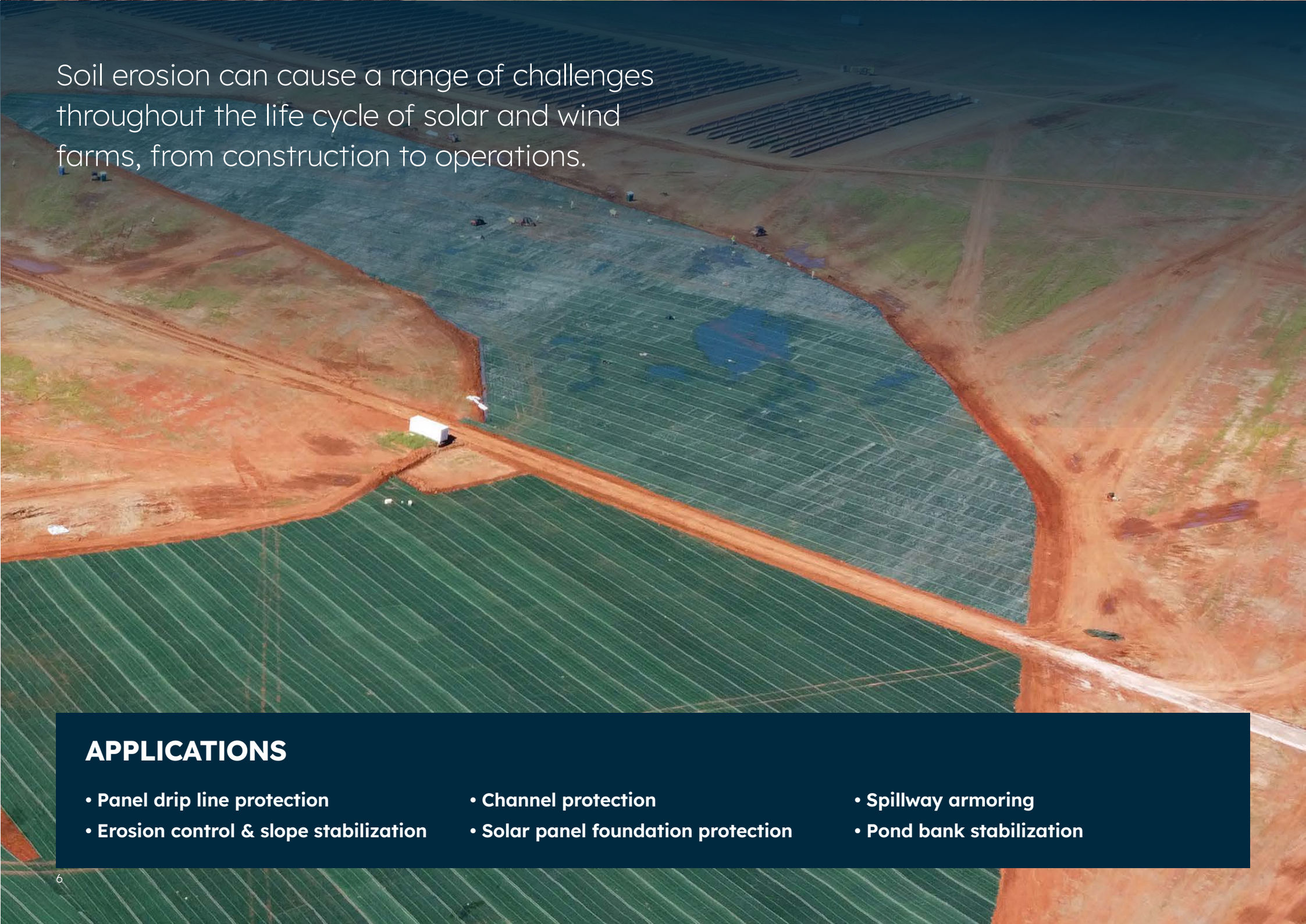


MIRAFI H₂Ri most aggressively manages moisture for applications with expansive clays, high water tables or frost heave challenges.



MIRAFI RS380i and **RS580i** provide passive drainage to balance moisture within a cross-section and prevent capillary breaks.

A range of geosynthetic solutions are used to stabilize roadways, but not all provide moisture management. This scale provides a quick guide to the level of moisture management yielded by several solutions.

An aerial photograph of a solar farm under construction. The ground is covered with green erosion control matting, which is being laid out in a grid pattern. A dirt road runs through the site, and a white trailer is visible on the left. The background shows rows of solar panels already installed.

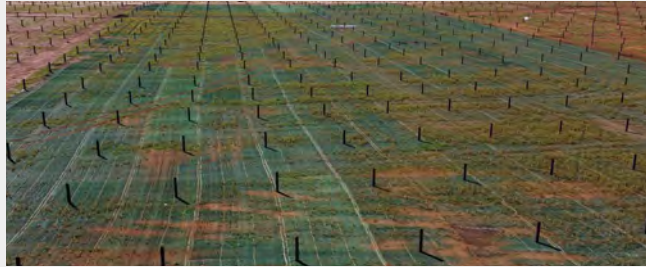
Soil erosion can cause a range of challenges throughout the life cycle of solar and wind farms, from construction to operations.

APPLICATIONS

- Panel drip line protection
- Erosion control & slope stabilization
- Channel protection
- Solar panel foundation protection
- Spillway armoring
- Pond bank stabilization

STORMWATER RUNOFF AND EROSION MANAGEMENT

PROPEX® erosion control and surface stabilization systems offer innovative solutions that are more sustainable and cost-effective than hard armoring materials. These technologies are designed to enhance vegetative reinforcement, ensuring a reduced carbon footprint at a lower installed cost compared to hard armor alternatives such as rock and concrete. Plus, these solutions can reduce the amount of aggregate by up to 90%.



PROPEX Armormax® Engineered Earth Armoring System™ is composed of High Performance Turf Reinforcement Mats (HPTRMs) and Engineered Earth Anchors™ (EEA) that work together to lock soil in place and protect against hydraulic stresses. This system provides both dynamic erosion control and slope stabilization solutions.



PROPEX Scourlok® is a robust Engineered Bank Stabilization System designed to resist extreme hydraulic stresses and protect shorelines and embankments while promoting vegetation. It was developed for applications that need below water scour protection in addition to slope stabilization and erosion control provided by Armormax and Pyramat Engineered Earth Armoring Solutions.



PROPEX Pyramattress Engineered Mattress System is an erosion control solution designed to resist potential scour and erosion caused by the constant flow of water or high hydraulic stresses. The system utilizes the durability and erosion resistance of Pyramat® 75 High-Performance Turf Reinforcement Mat (HPTRM) to construct a geosynthetic/soil/rock composite for protection of channels, slopes, and spillways.

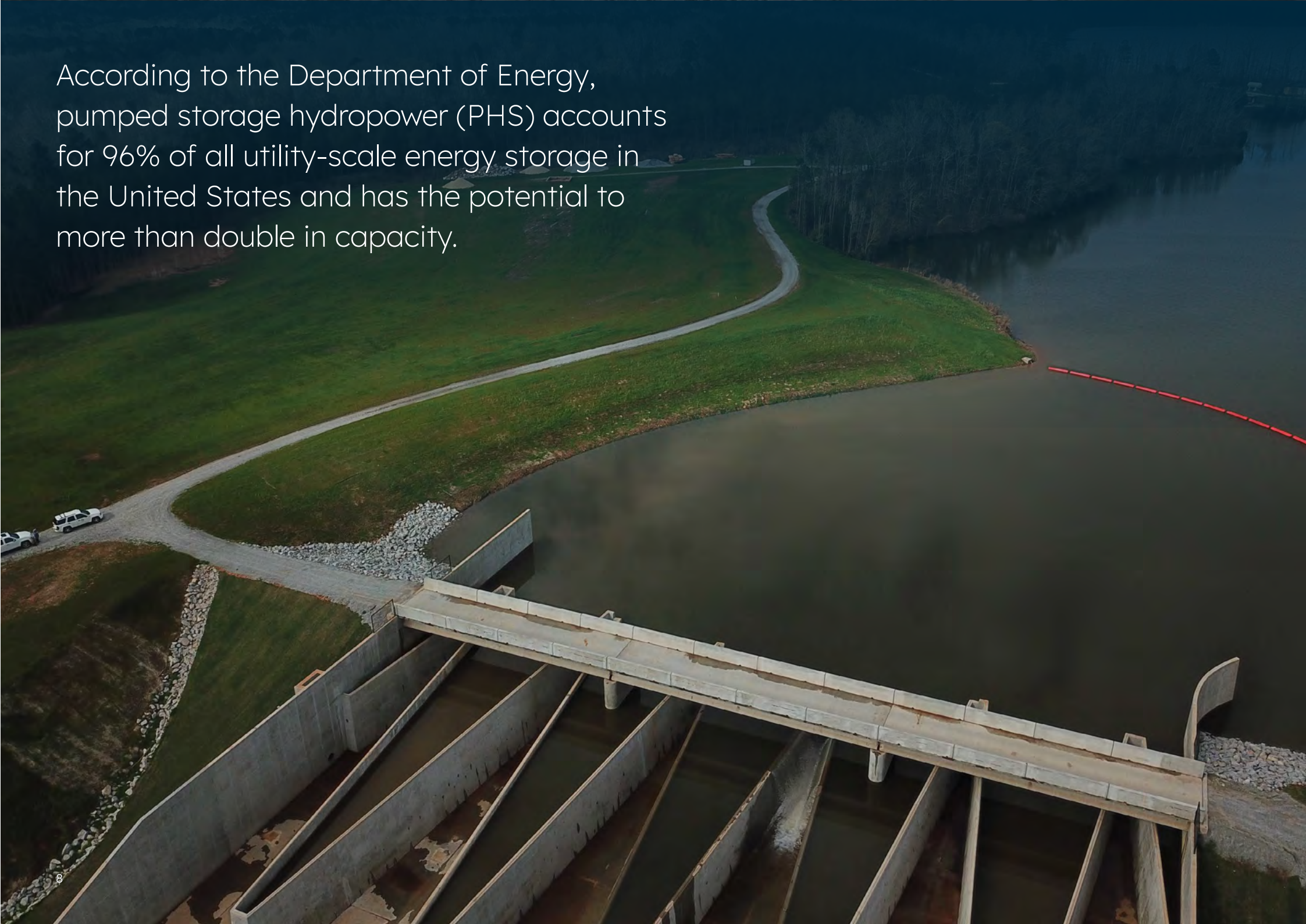


PROPEX Pyramat® 75 HPTRM is a three-dimensional, lofty, woven polypropylene geotextile. Designed with patented X3® Fiber Technology, it is specially engineered for superior erosion control on steep slopes and vegetated waterways. From cradle-to-grave, the carbon footprint of 1m² of Pyramat 75 is 2.7 kg CO₂e, which is up to 30 times lower than concrete and rock alternatives.



PROPEX Landlok® 450 Turf Reinforcement Mats (TRMs) featuring X3® Fiber Technology are three-dimensional and/or stitch-bonded polypropylene geosynthetic that deliver long-term erosion protection. By reinforcing roots and stems, Landlok promotes vegetation, which has been recognized by the EPA as the most effective form of erosion control.

According to the Department of Energy, pumped storage hydropower (PHS) accounts for 96% of all utility-scale energy storage in the United States and has the potential to more than double in capacity.



SUPPORT FOR HYDROPOWER UTILITIES

Pumped Storage Hydropower facilities utilize water fluctuations to generate energy and rely on structures such as reservoirs, dams and spillways.

Water fluctuation can cause erosion and sedimentation, potentially jeopardizing the performance of PHS facilities.

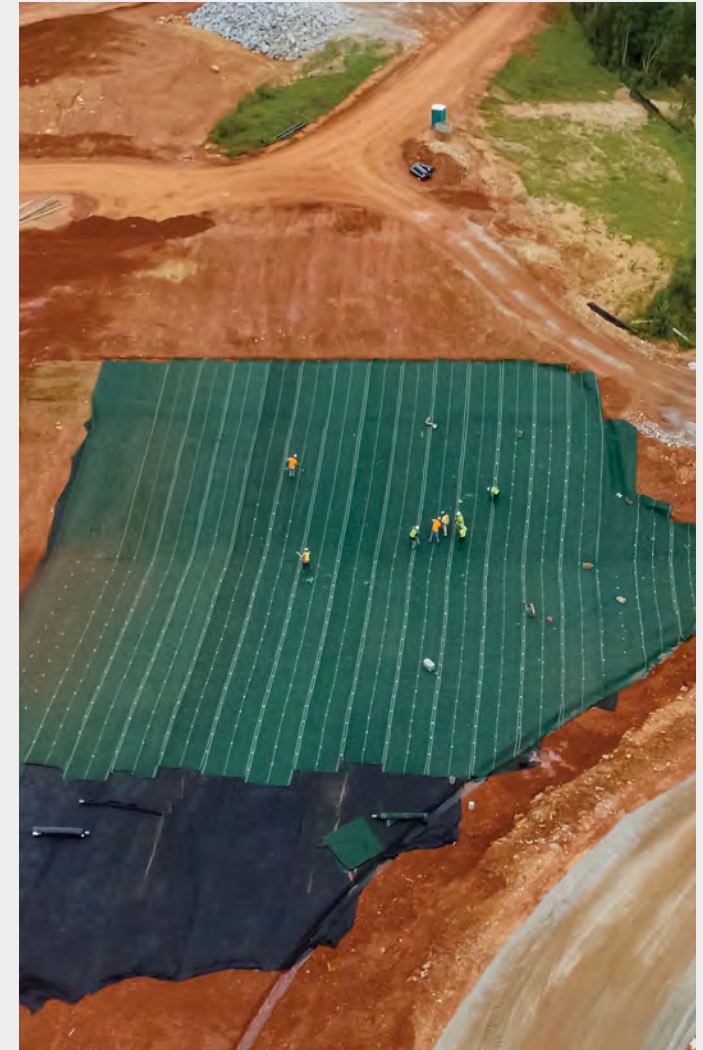
PROPEX erosion control solutions can mitigate erosion and stabilize and protect the dam slopes against overtopping and surficial instability.

APPLICATIONS


- Slope stabilization for dams and spillways
- Erosion control for tail water structures and drainage systems
- Passive pressure relief & venting



PROPEX® Scourlok



PROPEX® Armormax



Reduce aggregate in access road construction up to 60% with **MIRAFI RSi-Series** and reduce rock rip rap up to 90% with **PROPEX** solutions for stormwater drainage systems.

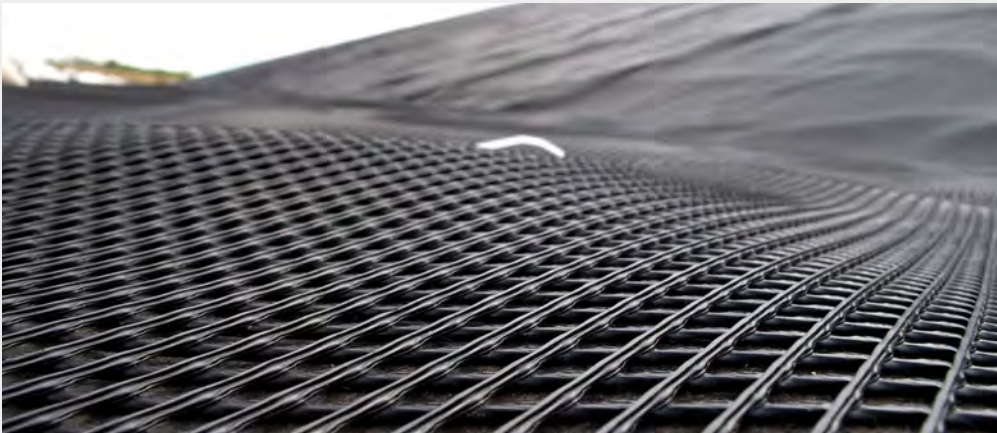
ADDITIONAL SOLUTIONS FOR SITE DEVELOPMENT



MIRAGRID® XT geogrids are the premier solution for soil reinforcement in Mechanically Stabilized Earth (MSE) Walls and Reinforced Soil Slope (RSS) structures.



MIRAGRID Miramesh® biaxial geosynthetics provide surface erosion protection and secondary reinforcement in MSE structures



FABRINET® drainage products are built around effective and efficient geonet drainage structures. Available in different configurations and key properties to provide the optimum drainage solution.



GEOLOUX® is an albedo enhancement solution that provides a maximized level of Solar Energy Reflectance to increase the ground albedo to approximately 75%, resulting in an optimum increase in the power gained from bifacial solar panels

About Solmax

Solmax is a world leader in sustainable construction solutions, for civil and environmental infrastructure. Its pioneering products separate, contain, filter, drain and reinforce essential applications in a more sustainable way – making the world a better place. The company was founded in 1981, and has grown through the acquisition of GSE, TenCate Geosynthetics and Propex. It is now the largest geosynthetics company in the world, empowered by more than 2,000 talented people. Solmax is headquartered in the province of Quebec, Canada, with subsidiaries and operations across the globe.

Uncompromised quality

Our products are manufactured to strict international quality standards. All our products are tested and verified at our dedicated and comprehensive laboratories which maintain numerous accreditations. We offer our partners a wide scope of testing according to published standards to ensure products delivered to sites meet specified quality requirements.

Let's build infrastructure better

Solmax is not a design or engineering professional and has not performed any such design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation, or specification.

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