

# Case Study: The Smithsonian Institute Bocas del Toro, Panama



- Location:** Smithsonian Institute  
Bocas del Toro,  
Panama
- Construction:** Shingle Roof
- Architects:** Kiss and Cathcart
- Completed:** March, 2003
- Peak Capacity:** 45kW
- Product:** TS Shingle, custom  
application using both  
standard 40W a-Si  
modules and semi-  
transparent 30W

The diversity of ecosystems of this complex region of islands, mainland bays, rivers and forested mountain slopes on the Caribbean sea in Panama, made Bocas an ideal site for the Smithsonian Institute's new research and education campus for marine and terrestrial studies. At the same time, the socio-politically complex and geologically fragile setting – a site with fisheries, growing tourism, agriculture and a significant population of endangered sea turtles and manatees – made it necessary to minimize the impact that the buildings would have on the surrounding environment.

To address these issues, the architects designed a low-impact center maximizing natural light, rainwater collection, and recycled materials – a model for sustainable use. An integral part of this design is the shingled solar roofing system designed by TerraSolar in cooperation with Kiss + Cathcart Architects to meet their specific needs.

The roof is covered with photovoltaic standing seam roofing and its south edge is inset with translucent solar panels that filter sunlight on the veranda along the entire length of the building. A modular photovoltaic shingle for new construction or retrofit applications, the TerraSolar Shingle combines the low cost and uniform appearance of thin-film modules with an easy-to-install, space-efficient shingle system.

Innovative Energy Solutions

TerraSolar Hungary Kft,  
Konkoly-Thege u. 29-33,  
Budapest, Hungary, H-1121  
Tel: (+36.1) 392.2784  
Fax: (+36.1) 392.2795

TerraSolar  
Fax: (+1) 718.422.0300  
solarinfo@terrasolar.com  
www.terrasolar.com

