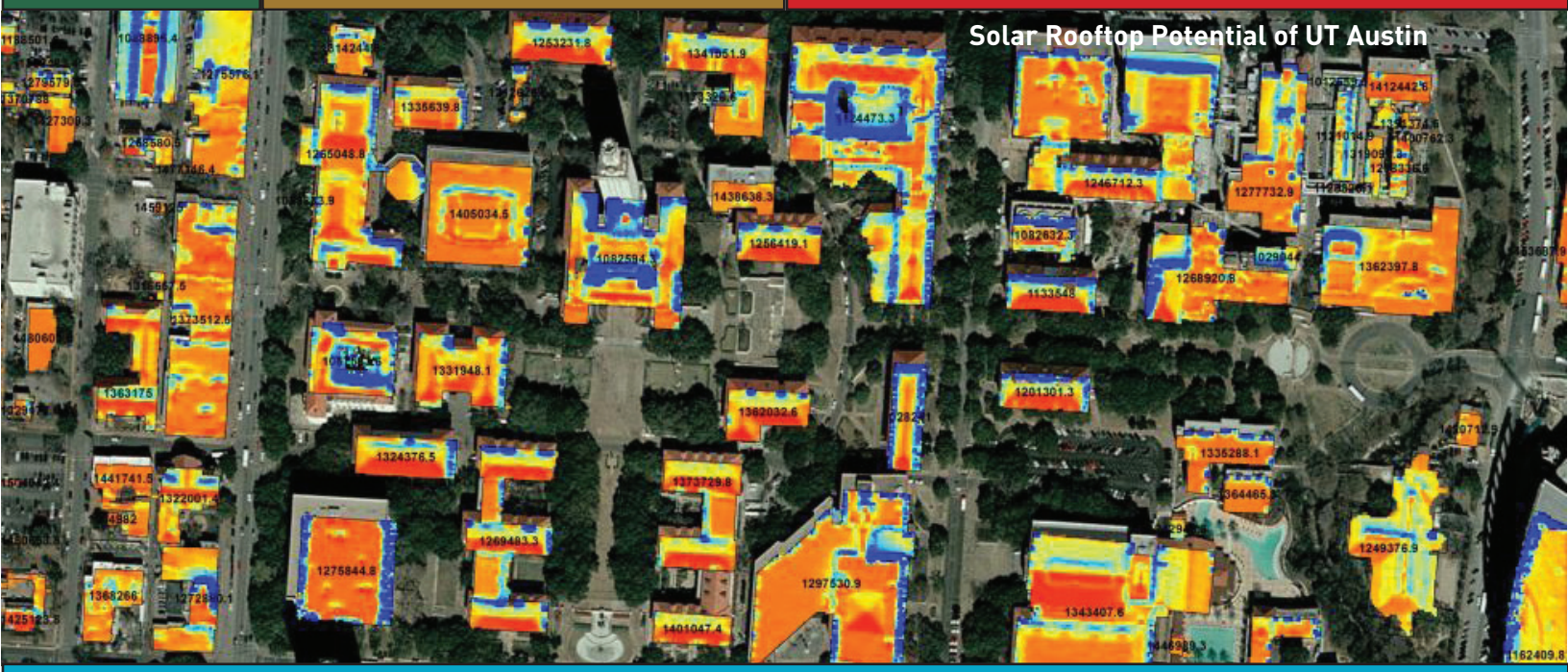

Are solar photovoltaic panels enough? Applications of LiDAR to Renewable energy study for Austin, Texas.

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Abstract

As one of the two icons of green energy, solar photovoltaic are ingrained into our society as a solution moving forward in renewable energy development. Unlike its cousin the windmill, solar PV can be integrated into our built environment and is gaining popularity with home owners installing PV panels on their roofs. Austin is seen as a progressive city and has adopted a green culture, where people with little incentive to install PV panels are adopting the technology. The question this study asks is can Austin offset its rising energy demands through the adoption of PV panels? In otherwords, is it in Austin economic interest to support PV panel installation through more aggressive policies like feed-in-tariffs? Through a geographic and economic analysis Sounny-Slitine will explore this societal belief that solar PV panels are the future.

Biography

As a participant in the Sustainable Architecture and Design Summer Abroad Program in Munich, Sounny-Slitine noticed the wide scale adoption of PV Solar panels on rooftops throughout Germany. Upon returning to Austin he wondered is it economically and physically feasible for Austin to have widescale adoption of PV Solar Panels. Being a Master's Student in Geography and The Environment and having completed dual bachelor's degrees in Civil Engineering and Geography, Sounny-Slitine knew that Geographic Information Systems (GIS) can be used to sustainably develop our built environment back in Austin. Shortly upon returning, he took the lessons learned from his experience in ClimaDesign at TUM to do an energy study, much like he did with TUM students during a workshop on Bridgeport, CT. His work for CSD exhibits that integrated approaches that incorporate many fields provides information needed to move forward sustainably.