New Report Finds City-wide Adoption of Smart Surfaces in California Can Improve Air Quality and Public Health, Cut Urban Heat, and Support Equitable Development

Groundbreaking report by Coalition of leading national health, city policy, energy, planning, equity, and architecture organizations demonstrates that Smart Surfaces are very cost effective in cutting soaring city temperatures, slowing climate change, and enhancing health and urban equity in hot dry climates

WASHINGTON, D.C. - (Oct. 26, 2021) - Cities across California and the U.S. are suffering from record heat waves, flooding and soaring urban heat deaths. The Smart Surfaces Coalition released a landmark report today detailing how cities across California can deploy Smart Surfaces to cost-effectively cut summer heat, slow global warming, enhance public health and equity and expand jobs. Smart Surfaces – including reflective, porous, and green surfaces, solar photovoltaics (PV) and trees – if deployed intelligently can manage sun and rain to make cities much more livable, cooler, healthier and more equitable – all with a benefit-cost ratio of more than 5:1.

“We know that this summer’s devastating heatwaves were driven by climate change. As we contend with the worsening climate crisis, there are proven, cost-effective solutions that allow cities to cool themselves even as the world warms,” said Greg Kats, CEO of the Smart Surfaces Coalition. “City-wide Smart Surfaces allow cities to become cooler, cut emissions, advance equity, strengthen local economies, and become healthier and more livable.”

Like many cities, Stockton is a mid-sized, diverse city in a hot-dry climate facing growing equity, heat, and flooding challenges. Benefits to Stockton of adopting Smart Surfaces at a modest level city-wide would include:

1. 2.9°F summer peak temperature reduction in downtown Stockton
2. $770 million 30-year net present value from adoption of Smart Surfaces
3. Benefit-cost ratio of 6-7:1 – with net savings from the first year
4. 4.6 million tonnes of CO2e emissions reduced over 30 years

The largest benefits would be seen in lower-income communities and communities of color, which tend to have less trees and darker, more impervious surfaces.

“Climate change is the greatest public health crisis of our lifetime and is an especially grave and immediate threat to urban communities, particularly lower income communities, which are at a higher risk of heat related injury,” said Dr. Georges C. Benjamin, M.D., executive director of the American Public Health Association. “Smart Surfaces are an important strategy to mitigate the health risk from extreme heat in a cost-effective way—it must be adequately funded, rapidly implemented, and brought to scale.”

“This Stockton case study demonstrates a very effective pathway for urban cooling, equity, and resilience... Californians should choose to prioritize health, equity and prosperity and adopt this strategy ASAP,” said Sustainable Silicon Valley’s Dennis Murphy.

The analysis, funded by the Institute for Governance and Sustainable Development, enabled the creation of a Stockton-specific Smart Surfaces analytic engine to model multiple adoption scenarios, and test, compare, and optimize a Smart Surfaces adoption strategy.

Please follow this link for the full report.

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