

The Future Of Energy Harvesting

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Energy harvesting? Let's begin by establishing a definition for the phrase. Energy harvesting as defined on Wikipedia is the process by which energy is derived from external sources (e.g., solar power, thermal energy, wind energy, salinity gradients and kinetic energy) that is captured and stored.

If we look around us, we notice how much energy each of us consumes and how much energy we expend in order to live life in the fashion in which we are accustomed, which is different for everyone. Energy harvesting is only limited by our ability to give pause and identify the ways in which we may be able to successfully extract and, very importantly, store the kinetic energy all around us.

I use the term kinetic energy because, from my perspective, I see a variety of sources that are ripe for the taking. But our ability to store that unused portion of energy for later use, transference or passive consumption is very important, one which has been the focus of millions of R&D dollars and where I see the future of energy harvesting having the greatest impact.

I see the future of energy harvesting being one where the engineers, designers, researchers, manufacturers and all other associated professions play an integral role. We have to eliminate the focus on dollars and instead set our sights on solutions for the betterment and longevity of humanity. I am not leading to a doomsday scenario in any way; I am saying that we all need to listen to our inner voice and do what is best for humanity.

Our resources are finite, and if we can manage to go to the "optometrist of humanity" to have our vision checked, we will be able to see where and what we should be doing to ensure our resources are used to the best of their ability.

We are seeing how many nations are standing on the rest of the world's shoulders as it relates to telecommunication (i.e. rural China). These same nations and those still in development will use what we have developed in order to improve their quality of life, and the best available option is what will be utilized.

I see street lights that have their own combination of solar cells (paint) and wind harvesting capabilities, and the light emitted from these structures are based on some low-consumption, high-output method, such as LEDs or OLEDs.

I see cars that drive on high traffic highways and through city streets that are covered in a piezoelectric system that harvests that energy. I see the cars having

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mechanisms that can capture the wind as they are being driven in order to recharge the batteries used to power them. Both of these systems need to store the energy we harvest in a well considered fashion. Too much energy is lost as we move it from one place to another.

But I only see things from my perspective. And I know that I am but one voice that can ask "What would you do?" or "How else can we do it?" I leave the rest up to you, those who are in the industries that can most directly affect the choices we have when it comes to consumption. The power of suggestion is incredible. I press you to get the conversation going and see where it takes the organization you work for. Your decision to begin the dialog can make the difference.

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