

OPPORTUNITIES IN PLANNING FOR SUSTAINABLE ENERGY AND WATER USE

Globally, energy and water use are in a highly interdependent power play. When we grapple for solutions for one issue, it can often offset benefits for the other.

There are several opportunities that, internationally, we are not sufficiently exploiting in order to reduce our consumption, while producing sustainable energy and water sources.

1. Access or monetary motivators

Oftentimes in Istanbul, Turkey, where I reside, the water simply doesn't run. I turn the knob for the sink and nothing. Upon moving from America, I was astonished, "An unreliable and non-potable water source?" Then I became more appreciative for all those times I could turn on the water, do the dishes, take a shower, or use the water for a myriad of other uses. Access, for many in the world, is more than simply turning on the faucet; it's a hike to the well, or sometimes none. In order to decrease individual and sector-related water use, we must reduce access and/or provide monetary motivators to reduce consumption.

Consuming water at unsustainable rates will always heighten the problem of water access, no matter how much we are able to attain, trade, or desalinate. However, both access and money are human motivators. Setting a marker for allowable household water and/or energy consumption, and penalties beyond that, would have households reconsider how they use resources, while sector-based water/energy use could be motivated in similar ways.

2. Education

Education has long been thought of as the slow-tail to policy implementation. While education may be the slowest to show results, it has the most lasting effects. As UNESCO stated in 1997, “It is widely agreed that education is the most effective means that society possesses for confronting the challenges of the future.” If we want to confront the global challenges of water and energy, we must take a multifaceted approach, including aggressive education implementation. This means educating the world, and the youth especially, that water and energy are the building blocks of modern civilization, and that in order to have energy, we must have water. And in order to have water, we must reduce wasteful consumption. This interplay between responsible energy and water use must become common knowledge, in addition to household and sector-related methods of reduction.

Simple water reduction methods to implement in households are faucet aerators, water-saving shower-heads, installing a rain barrel or rainwater tank for non-potable uses, and more. By educating, we can help ensure more sustainable consumption practices for the future – and a new world outlook.

3. Regional climactic and resource advantages



By utilizing regional differences in weather, rainfall and catchment can be effective means to reduce storm-water runoff, while increasing non potable water access. In terms of energy, globally, our regional differences provide opportunities for sustainable energy solutions. By identifying solar, geothermal, and wind resources by regions, opportunities are identified for micro-climates and sub-regions. Deserts and oceans pose exceptional energy creation opportunities through the use of solar power stations that use economies of scale, offshore wind energy in shallow waters, floating wind turbines, and wave power.

Additionally, individuals, globally, create waste. Whether that is waste that heads to the landfill or the waste treatment facility, these are opportunities that are not being substantially explored. And what about solving desalination and energy production with one stone like Bruce Logan is attempting? Around the world, investments in solar, geothermal, organic waste-to-energy, wind, and wave energy production are sustainable and increasingly less cost-prohibitive with economies of scale.

Source: <http://www.globalsiteplans.com/environmental-design/urban-planning-and-design/opportunities-in-planning-for-sustainable-energy-and-water-use/>