

To: Senate EEE Committee and House ENV Committee
From: Chesapeake Physicians for Social Responsibility, with over 900 members statewide (<https://www.chesapeakepsr.org>)

SB804 and HB973 – FAVORABLE

Maryland Building Performance Standards: The Better Building Act

Thomas Edison in 1931: *"We are like tenant farmers chopping down the fence around our house for fuel when we should be using Nature's inexhaustible sources of energy - sun, wind, tide - I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that."*

Energy Input: The Earth receives approximately 173,000 terawatts (TW) of solar energy continuously, which is more than 10,000 times the world's total energy consumption (Massachusetts Institute of Technology).

Solar Energy vs. Human Consumption: The energy from the Sun that hits Earth in just one hour is more than the total energy humans use in a year (Drexel University)

Potential Utilization: To meet global energy needs, we would need to harness a very small fraction of this energy. For instance, covering an area roughly the size of Texas with 10% efficient solar panels could provide the energy used by humans in a year. (Drexel University)

William McDonough: *"Regulation is a sign of design failure"*

(First individual recipient of the Presidential Award for Sustainable Development; Time Magazine "Hero for the Planet")

We live in two worlds: the natural world and the built world.

In the natural world, there is 100% generative re-use. Think of a tree as an example: it cleans the air, provides habitat, makes food, and creates resource.

We are responsible for the built world. Though many amazing, wonderful - and sometimes scary things - have been made, the products of the built world hit a dead end at some point. Besides the materials used and consumed, it's estimated that buildings in the US consume 40% of all energy and 75% of all electrical energy. Further, we know that fossil fuels will run out at some point, whether it's 10 years, or 20, 50, or 100. Let's start planning for that now.

Why Better Buildings.

Numerous studies and examples demonstrate

- Environmental benefits: Better Buildings use less energy, are less polluting, and some can even generate energy.

- Health Benefits: Better Buildings support those who live and work in them with improved air quality, reduced exposure to toxins, reduced absenteeism, and increased productivity.

The challenge is this: Can we design and construct buildings that function like a tree? The answer is “Yes”, and it starts with intention and design at every level, from the biggest structures down to the molecular level. Instead of the products of human construction being wasteful cradle-to-grave, human activity becomes cradle-to-cradle.

There are numerous examples of this, and a quick search yields numerous reports: https://en.wikipedia.org/wiki/Green_building

- The Herman Miller SQA factory in Michigan includes a series of manmade wetlands that process and purify the building’s stormwater. Set on 37 acres, the 295,000 square foot building is often called the “GreenHouse”.

- The Rouge River Plan for the Ford Motor Company (https://en.wikipedia.org/wiki/Ford_River_Rouge_complex) includes the world's largest “living roof” (https://en.wikipedia.org/wiki/Green_roof). Its 1,100,000 square foot roof is covered with more than 10 acres of flowering plants.

- The award-winning documentary movie “The Next Industrial Revolution” highlights this approach to design: <https://vimeo.com/20372160>

Does doing this cost more? No, it does not, and even if it were to cost, for example 3% more to build a Better Building, the question becomes whether we want to build 100 energy-consuming polluting buildings or 97 efficient ones? Despite possibly marginally higher initial costs, Better Buildings offer substantial long-term savings through reduced energy and water consumption, lower maintenance costs, a healthier workforce, and increased property values. These savings more than offset any extra initial expense.

This all goes back to design. What is our intention when planning construction? It turns out that the perspectives thought to be in competition and conflict– profitability versus positive health and environmental impact – don’t have to be and shouldn’t be. In fact, by thinking it through, these two goals are compatible, synergistic, smart, and beneficial.

That’s why SB804 and HB973 deserve your support and favorable report.