

**A State of Maryland Green New Deal  
(a grand transition to a sustainable economy and environment)  
Good for the Climate, People, and Business**

September 1, 2019

**Introduction**

Most scientists and an increasing majority of US citizens have come to recognize that we are now facing an energy and environmental crisis that pose a very real threat to the quality of life on this planet. What can we do about it? How have the American people and their elected representatives responded to crises and challenges in the past? How can we mount a response today that includes all sectors of the American society?

Lessons can be drawn from the three greatest crises of the 20<sup>th</sup> Century: the stock market crash of 1929, the economic depression that followed, and World War II. The Space Race of the 1960's is also informative.

Our response to the 1929 stock market crash and the depression was the Roosevelt administration's initiation of bank reforms on the one hand and work project programs on the other. Those work programs put millions of Americans to work building major infrastructure projects—roads, dams, schools, and libraries—bringing electrical power to many rural areas for the first time, and both conserving and making our national parks more accessible.

The US response to the attack on Pearl Harbor in 1941 and the aggressions of the Axis Powers was a nearly total transformation of the nation's industrial economy to support the war effort: war bonds, rationing, and the shift of the production of domestic goods to equipment for war—jeeps, tanks, ships, and airplanes. A "Cost Plus" system accelerated federal contracting. Societal transformations also occurred. Woman became a larger and more important part of the domestic work force as men left jobs to join the armed services. Prohibition of racial discrimination was enacted in the defense industries. Investment in the research sciences accelerated. After the war, a similarly robust transformation continued and sustained the US economy included advancements of education at all levels albeit, the unequal and often discriminatory racial practices of public education.

During the 1960s, when the Soviet Union challenged the United States for supremacy in space, President Kennedy marshalled America's technical and economic resources and sent American astronauts to the moon in less than a decade. This extraordinary feat and the numerous technical advances that laid the ground work for many of technologies that are fundamental to our lives today.

Of all the images from that 20<sup>th</sup> Century era, one has proved most memorable and compelling. Taken by astronaut Anders on board Apollo 8, it is the blue earth floating in the vast vacuum of black space above the stark surface of the moon.

As stated in a July 21, 2019 Washington Post article:

*"Astronauts Anders and Borman having almost reached their hearts' desire found themselves afflicted by 'torments of nostalgia' something almost like remorse'. 'Our earth was quite colorful, pretty, and delicate compared to the very rough, rugged, beat-up, and even boring lunar surface'. 'I think it struck everybody that here we'd come 240,000 miles to see the moon and it was the Earth that was really worth looking at."*

*"Today, the wisdom latent in Anders's words is obvious'. 'Humans have created an emergency here on Earth and need, more than anything, to solve the problem of how to be at home where we are."*

**Earth was and is our oasis of life.**

These are examples of national efforts to confront existential threats or meet technological challenges. They demonstrate that individuals, businesses, our government, and a nation can act in positive and bold ways to protect ourselves and even improve the human condition.

Scientists with few exceptions are now warning that we face a global environmental catastrophe which will require international, national, and local action to reverse climate change. Because the international community and our national government have been very slowly to act, it may be up to localities such as the states to lead the way and become the problem solvers.

The people of Maryland, their political leaders, public officials, and community and environmental organizations have done much already to protect our land, air, and water. Furthermore, we have made Maryland a more sustainable place by working to grow its renewable energy portfolio.

We now need to build on that already comprehensive body of legislation and private development and capital; but how can this be done? Taking a cue from the recent discussion about a national Green New Deal, Maryland should assemble and employ all the related state and federal programs, all the organizations, the human and financial resources, and our businesses in a comprehensive effort to mitigate climate change and become both a laboratory and a model for the rest of the nation.

## **A State of Maryland Green New Deal**

Maryland Green New Deal could bring tens of thousands of jobs to the state while making every aspect of the economy more sustainable and resilient. It will introduce or encourage the use of the latest energy, conservation, food, solid waste management, transportation practices and technologies while protecting the state's natural environment. This transformative effort will involve every level of government, encourage the creation of new businesses, and leverage the state universities' research and development capabilities. The outcome will be the expansion of employment opportunities across the state but especially among low income population groups that have not benefitted from the state's recent economic prosperity. All areas of the State will play a role and will benefit, including rural, suburban, urban, and the inner-city.

What follows is a range of sustainability and climate change mitigation actions and programs. In many cases, there has been substantial work done implementing these (or portions of them) already. However, in order to face the existential threat posed by human as greenhouse gases levels increase in the earth's atmosphere and harmed our natural environment, there should be a Green New Deal that integrates all into a state-wide effort.

**Here are some examples, each of which could be turned into state legislation:**

### **1. Renewable Energy Projects**

- A. Build commercial scale solar PV on marginally productive farmland, utility HVTL right of ways, highway right of ways as has been done on the German autobahn and on landfills and brownfields. There are 2000 linear miles of HVTL right of ways crisscrossing the state. Kept cleared of trees, these long pieces of land (sometimes as much as 250 feet wide) are in some cases not farmed and remain underutilized. Here might be the space for much of Maryland's future solar expansion.
- B. Encourage joint-use land projects that incorporate solar installations, crops including pollinator-friendly plants, field maintenance by sheep or other animal grazers.
- C. Pitch solar as a long-term cash crop that can be reliably depended upon by farmers regardless of weather or market conditions.
- D. Remove zoning obstacles to solar PV on agricultural land but establish safeguards that protect prime farmland.
- E. Move away from corn-based ethanol production which is extremely energy inefficient and replace with a "solar crop" which would require only a fraction of the land now given over to corn production (A solar panel produces 500 times the energy that a corn crop produces on a similar area of farmland. Right now, a fifth of Maryland's corn crop acreage (about 500,000) is used to produce ethanol.) Return farmland to producing food that can be sold on the world market as the planet's population continues to expand.
- F. Site community solar projects locally on apartment, office, school, warehouse, and shopping center buildings and above surface parking and garages.
- G. Build Wind projects, especially offshore or in other high wind areas near the bay. Bring wind turbine assembly and manufacturing plants in Maryland.
- H. Build solar module manufacturing plants in the state that compete with Chinese imports that could include employment and training facilities within the state penal system.
- I. Provide financial incentives to build geo-thermal heating and cooling systems on a wide range of buildings.
- J. Encourage special case co-generation projects using anaerobic digestion-to-fuel, existing gas-fired central heating plants. The more decentralized energy production is, the better off we are. There are options for energy production that are common in developing countries that could be used in the US; it would have the added benefit of re-purposing waste that otherwise goes straight into the Bay. – see this article:  
<https://www.npr.org/sections/thesalt/2017/04/23/524878531/waste-not-want-not-why-arent-more-farms-putting-poop-to-good-use>
- K.

- L. Seek federal infrastructure funding to adapt the power grid to distributed generation.

## **2. Energy Conservation and Efficiency**

- A. Incentivize the upgrading of building envelopes and HVAC systems in existing buildings and construct new buildings to high energy standards that will result in low energy use, increased comfort, and better indoor air quality. Develop more stringent building/energy codes in our counties and Baltimore City.
- B. Expand the low-income weatherization program for individual homes and multi-family public housing buildings.
- C. Convert conventional lighting to LED and/ controls for all public buildings and streetlights. LEDs provide the same light levels (lumens) at a fraction of the energy and are far less expensive to maintain.
- D. Our public electricity utilities seek to sell as much power as possible to satisfy their stockholders and offer pricing incentives to big power consumers. Instead the utilities should be supplying light, heating and cooling, and computing power for energy efficient machines, lights, electronic equipment, and appliances. Establish incentive programs for the conversion of existing low efficiency electric-powered equipment to energy efficient equipment.
- E. Expand the EmPower Maryland Program by providing more state funding that includes a greater education and public awareness campaign.
- F. Encourage roofing contractors to use of cool roof coating and roofing systems. These reduce surface roof temperatures and building air conditioning demand, mitigate the urban heat island effect, and lessen the need to landfill roofing waste materials.
- G. Upgrade the building envelope and HVAC of existing buildings and build new structures to high energy standards.
- H. Incentivize energy conservation with a cap and trade system which taxes inefficient building construction. Require homebuilders to disclose energy efficiency and green code compliance in understandable terms to homebuyers before closing on contracts (as is done during the sale of automobiles).
- I. Require commercial building owners to establish and disclose energy efficiency numbers (Energy Use Intensity) to purchasers and tenants (Benchmarking).

## **3. Food production**

- A. Encourage local food production and the expansion of fruits, vegetables, and wines grown on Maryland's rural farms and "urban farms".
- B. Eliminate food deserts that plague many low-income communities through the support of farmers markets, community gardens, home gardening training, and local food processing.
- C. Improve nutrition through education and incentives for buying fresh produce.
- D. Integrate "Regenerative Agriculture" practices into conventional farming and food production.

## **4. Solid waste management, composting, and recycling**

- A. Focus on/promote/advocate/incentivize "cradle to cradle" technologies and products that reduce waste at all points in the life cycle of a product.
- B. Institute "Pay (save) as you throw" programs for County and municipal trash collection programs which have proven to reduce solid waste tonnage.
- C. Require multi-family buildings and commercial businesses to institute recycling programs and hire contractors to collect recyclables.
- D. Establish recycling and waste reduction programs in hospitals, government offices, and facilities.
- E. Create waste or resource recovery parks (also called reuse centers) across the state for the processing, repair, and resale of reusable materials such as books, textiles, mattresses, furniture, and appliances. Model enterprises include Second Chance building deconstruction in Baltimore and Community Forklift of Edmonson, Saint Vincent De Paul, Lane County, or network of reuse workshops such as HomeBoy Industries, Los Angeles and Recycle Force, Indianapolis, e scrap deconstruction and repair. These businesses provide revenue and create good jobs for Marylanders including former felons.
- F. Build manufacturing plants that use recycled materials to produce new products rather than sending them out of state or abroad.
- G. Reduce plastics use and manufacturing whenever possible; promote reusable packaging.
- H. Fund research for biodegradable plastics.
- I. Expand collection of food waste and other compostables from residential, institutional, and commercial sources.
- J. Develop composting facilities such as the commercial-scale Prince George's County Western Branch food waste recovery facility and also smaller community-scale operation within neighborhoods, at commercial food processing operations, and at hospital and educational institutions. Where composting facilities are operated near populations, use in-vessel composting technologies to avoid nuisances such as odor, vermin, and ground water contamination.
- K. Encourage residential back yard composting.

## **5. The natural environment and the Chesapeake Bay watershed**

- A. Incentivize construction of new storm water management projects in urban and suburban areas.
- B. Work toward reaching the state's nutrient reduction goals by 2025 for all sectors including agriculture, developed areas, wastewater, septic, and natural areas
- C. Conserve Maryland protected lands including prime farm and Targeted Ecological Areas.
- D. Strengthen regional cooperation so that all states in the watershed comply.
- E. Maintain and expand connected networks of natural habitats through greenways.
- F. Expand tree planting programs across the state to sequester carbon and reduce runoff.
- G. Repopulate and significantly expand the number and area of oyster beds in the Chesapeake Bay and mussel beds in the tributaries.
- H. Restore native submersed aquatic plant beds to provide habitat, protect shorelines, and capture sediments.
- I. Make natural areas more resilient to the effects of climate change.
- J. Discourage development that converts natural and farmlands to impervious surface and instead prioritize new developments that fill in suburban and urban areas near existing public transportation to reduce solo-trip transportation needs.

## **6. Green jobs and job training**

- A. Make key elements of the Green New Deal job creation and job training of the state workforce.
- B. Establish training programs in low income areas to facilitate the process of getting the unemployed and under-employed back to work with new skills ranging from solar panel installing to farming. Prince George's Community College and Civic Works in Baltimore already have model training programs.
- C. Expand training programs within the state prison system that will give former inmates real job opportunities once they are no longer incarcerated and will reduce their chances to become recidivists.
- D. Seek the business community as a partner in the development of new green startups across the state but especially in high unemployment areas.
- E. Build solar panel, battery, and solar car, or wind turbine manufacturing plants that offer local jobs and keep dollars in the Maryland. Seek to become an exporter of green technologies, food crops, and equipment.
- F. Make Maryland's economy a circular economy that keeps capital within the state and allows dollars earned to be spent locally.
- G. Use the research and training resources of the University of Maryland and our other education institutions.

## **7. Green transportation**

- A. Reduce greenhouse gas production by improving residents' transit opportunities through the building of better train, bus, and bike facilities and systems & improve local & Metropolitan planning to alter long-term patterns and densities of land-use for greater sustainability and resilience.
- B. Focus more dense development in and around public transit hubs.
- C. Build more extensive bus systems to provide better serve our low-income communities and workers with limited transportation options.
- D. Encourage and incentivize EV use and EV charging stations.

## **8. School program enhancement**

- A. Create teaching curricula for elementary and high schools on climate change, the environment, sustainability, and resiliency.
- B. Provide climate change and sustainability training for teachers especially those teaching science but also school system administrators.
- C. Develop curricula that focus on food, diet, and food production.

## **9. Regional partnerships**

- A. Establish green partnerships and agreements with neighboring states and the District of Columbia on common issues and problems. Work with existing organizations such as the Chesapeake Bay Foundation, the Washington Area Council of Governments, the Maryland Municipal League, the Maryland Department of the Environment, the Maryland Energy Administration, public transit systems, low income communities and their advocates, the state and national Sierra Clubs and other environmental organizations, labor unions, faith groups, and Maryland farmers.
- B. Encourage, involve, and incentivize local businesses and those beyond our borders to manufacture, install, and provide green services within and for the Maryland economy.

