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Energy Master Plan  
BOARD OF PUBLIC UTILITIES  
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**Testimony of Lawrence J. Furman  
Before the Board of Public Utilities  
Regarding the New Jersey Energy Master Plan,  
Oct. 23, 2006.**

My name is Lawrence J. Furman. As a citizen of New Jersey, residing in Manalapan, I would like to thank you for holding this series of meetings and for listening. And I would like to offer a few suggestions.

1. Build a Wind Power facility offshore.
2. Use Clean Energy to power government buildings.
3. Use high mileage vehicles.
4. Use the tax code to reward people to drive efficient cars, and punish people who drive 'gas guzzlers.'
5. Use Ft. Monmouth as a Research and Development facility for Clean Energy, Stem Cells and other 21<sup>st</sup> Century technologies.
6. Use Eminent Domain to condemn abandoned buildings and then lease those buildings to a Photovoltaic Solar Module or Wind Turbine manufacturers.

Here are the details

1. Build a Wind Power facility offshore

The Governor's "Blue Ribbon Panel on Offshore Wind Turbines" found that electricity could be generated by an facilities built off the coast, and that that electricity would cost 9 cents per kwh.

This is energy without pollution – no mercury, no toxic wastes, no radioactive waste, no greenhouse gases, no fuel, no fuel costs, no fuel spills, no dependence on foreign powers that may be hostile, no special national security concerns.

On Thursday you will meet in Atlantic City. I hope you take a look at the 8 MW solar and wind powered electric plant at the Water Treatment Plant.

Airtricity and General Electric built an offshore wind farm on the Arklow Bank of Ireland a few years ago. It is a small facility – 25 MW total from 7 turbines rated at 3.5 MW each. It was built in a matter of weeks. And the technology scales. 70 Turbines would produce 250 MW; 700 would produce 2.5 GW.

New Jersey needs to proceed with the development of an offshore wind prototype, and then build a full scale 500 MW to 2 GW offshore wind power facility.

2. Use Clean Energy to power government buildings.

The Clean Energy Program is designed to encourage people to install Clean Energy systems on their properties. While our national zeitgeist paints a picture of a nation of rugged individualists, the reality is that many of us look to our neighbors to set an example. If they do it, we do it. And until they do it, we don't either. This is reflected in the cars we choose to drive, the clothes we wear, and other decisions we make.

Solar works well. Most people agree that it's a good idea. But they don't do it. It's too new. But if we put solar panels on the roof of our schools, courthouses, office buildings, train stations, if we put ribbons of solar modules between the roadbeds of the Parkways and the Turnpike, people will get the picture.

3. Use high mileage vehicles.

Here's a 7<sup>th</sup> Grade math problem: If my car gets 10 miles per gallon then how much fuel will I use to drive 10,000 miles? What if it gets 40 mpg? And what if I'm going 100,000 miles? And if fuel costs \$3.00 per gallon, how much will it cost to go 10,000 miles? And how much to go 100,000 miles?

The Answers:

Mileage	10,000 miles		100,000 miles	
	Fuel (gallons)	Cost (\$3.00/gal)	Fuel (gallons)	Cost (\$3.00/gal)
10	1,000	\$3,000	10,000	\$30,000
20	500	\$1,500	5,000	\$15,000
40	250	\$750	2,500	\$7,500
50	200	\$600	2,000	\$6,000

The state can save money by buying high mileage vehicles. Pickup trucks, ambulances, etc. should be diesel. My understanding is that government vehicles can be fueled at government fueling stations; and the state doesn't pay state sales tax – but it should set an example. And it would save the taxpayers money.

4. Use the tax code to encourage people to drive efficient vehicles, and punish people who drive 'gas guzzlers.'

In New Jersey today, auto registration fees are based on vehicle weight. Under 3500 pounds: \$59.00. Over 3500 pounds, \$84.00. I imagine that is because heavier vehicles have a greater impact on the roads. So the registration fee today may be based on environmental impact. Why not base the fee on mileage – the higher the EPA mileage estimate; the lower the fee. Base it on the cost to drive 1000 miles, and the price of gasoline on some reference date.

I have a '99 Chevy Malibu; it gets me about 25 miles per gallon on the highway. I would burn 40 gallons to drive 1000 miles. At \$3.00 per gallon, it would cost me about \$120.00. I don't have a Hummer. And those vehicles are so heavy that there are no EPA mileage estimates for them. However, according to Wikopedia, they get between 8 and 14 mpg. So to go 1000 miles, at 11 mpg, (11 is the arithmetic mean of 8 and 14) requires 90.91 gallons of gas. At \$3.00 per gallon, that's \$272.73.

5. Use Ft. Monmouth as a Research and Development facility for Clean Energy, Stem Cells and other 21<sup>st</sup> Century technologies.

While the Administration in Washington is desperate to "stay the course" of this disastrous war in Iraq, it is ready to abandon the people of New Jersey and the mission at Fort Monmouth. Maybe that's because "The Mission" at Fort Monmouth is 2-way communications - dialogue - and the Administration in Washington is more likely to engage in monolog than dialogue, I don't know. Maybe we should reinvent Ft Monmouth as Research and Development center devoted to Clean Energy, Stem Cells, and other 21<sup>st</sup> Century Technologies.

6. Use Eminent Domain to condemn abandoned buildings and then lease those buildings to a Photovoltaic or Wind Turbine manufacturer.

Eminent Domain should never be used to push people out of their homes. But maybe it should be used to take over and revitalize abandoned property.

My friends in the solar energy industry tell me that there is a shortage of solar modules. There is some vacant industrial and commercial space in New Jersey. Maybe we should use "Eminent Domain" to lease some of that space to solar power and wind power manufacturers – companies like Sunpower, Evergreen Solar, BP Solar, World Water and Power, Powerlight, Akeena, in the solar energy space, and GE, Airtricity, etc. in the wind power world.

Here's the fundamental challenge: we are a state with a population estimated to be 8.7 million people. We require 7 Gigawatts of electricity generation capacity. Wind, Solar, and other clean energy technologies can be brought online very quickly and produce power without pollution. There is no fuel so there are no fuel costs, and there can be no fuel spills. No mines. No wells. There is no pollution – no mercury, no other toxic wastes, no greenhouse gases, no radioactive wastes. It's not harmful to the environment. And it's good for the economy.

What are we waiting for?