



Unitarian Universalist Legislative Ministry

A voice for justice, equality and compassion in New Jersey

Speaking out for Environmental Protection

NJ Free: Renewable Energy Policy

Position: In a 2006 Statement of Conscience the Unitarian Universalist Association stated: “Earth is our home. We are part of this world and its destiny is our own.... As Unitarian Universalists, how can our faith inform our actions to remedy and mitigate global warming/climate change? We declare by this Statement of Conscience that we will not acquiesce to the ongoing degradation and destruction of life that human actions are leaving to our children and grandchildren. We as Unitarian Universalists are called to join with others to halt practices that fuel global warming/climate change, to instigate sustainable alternatives, and to mitigate the impending effects of global warming/climate change with just and ethical responses. As a people of faith, we commit to a renewed reverence for life and respect for the interdependent web of all existence.”

What is NJ FREE? NJ FREE is a broad-based coalition of organizations and individuals committed to the transition of New Jersey’s energy economy from a fossil fuel-based system to one based on renewable energy. NJ FREE seeks the adoption of a requirement for 80% renewable electricity by 2050, with an intermediate requirement of 30% renewable electricity by 2025. It also seeks a requirement that the total electric usage in New Jersey be reduced by 20% by 2025 relative to 2012 usage, and be reduced by 30% by 2050 relative to 2012 usage

Is 80% Renewable Electricity by 2050 feasible? This question is already being answered in the real world. Many European countries have already adopted requirements that are as ambitious or even more so. Denmark’s goal is 80% of *overall* energy by 2050. Germany, on the other hand, has a much lower solar resource than New Jersey, and has adopted a requirement of 80% renewable electricity by 2050 and 30% by 2025. Furthermore, it is well ahead of schedule, achieving 26% renewable electricity in the first half of 2012. Germany’s rapid transition toward renewables and equally rapid phase-out of nuclear power has not hurt its economy. According to the country’s top economic research institutions, Germany’s “Renewable Energy Transformation” has been a net benefit to the economy, and has created 370,000 new jobs.

Why now? New Jersey has arrived at a time of decision for its energy future. Several factors put us at a crossroads. Reports show that 20 gigawatts of coal-fired power plants at high risk of retirement. Furthermore, the Oyster Creek nuclear power plant is slated to retire in 2019. For a number of reasons, coal and nuclear plants face a difficult future. There will be a need to guide decisions regarding what sources of energy will make up new electric generation capacity.

Natural gas is not the answer. The emerging picture of the environmental cost of increased production – which must come through unconventional drilling (fracking) - reveals local pollution risks as well as a greenhouse gas footprint that may be as bad or even worse than that of coal.

New Jersey’s perspectives have changed since Superstorm Sandy. There is a new perception that the cost of global warming, rather than something that will impact our lives in the future, is costing us dearly now. The storm also highlighted the fragility of our electric grid. Renewable energy offers a highly distributed, onsite, uninterruptible source of energy.

The costs of solar energy and battery storage have both been dropping very rapidly. The combination of these two developing technologies can not only deliver solar power efficiently and provide highly distributed emergency power capacity, but they can simultaneously provide “ancillary services” to help stabilize the electric grid – day and night. In fact, these novel services can now produce enough revenue so

that the emergency power capability can be provided at little or no net cost. Solar power can thus play an important role in storm hardening and grid stabilization without the high cost associated with other infrastructure changes. New business models are already emerging to take advantage of these capabilities.

Wind power, energy efficiency measures, and demand-side management, like solar power - all essential parts of a renewable energy transition - are intensive job creators, especially of local, high-quality jobs. The ability of renewable energy to generate economic growth and create jobs has already been proven in New Jersey and other leading renewable energy states and countries.

Why New Jersey? Some of the conditions justifying a renewable energy transition exist in many different states, but it might surprise people to know how many of those conditions coincide in New Jersey.

- New Jersey, as the state with the highest penetration of PV power and as the second-largest solar power market in the country, already has a substantial solar industry infrastructure with thousands of skilled workers and professionals ready to deploy. It also has an excellent offshore wind energy resource base.
- A recent study published by the National Academy of Science and conducted at Carnegie Mellon University (attached) calculated the value of avoided environmental costs in all U.S. states when solar power is deployed. The study concluded that environmental value delivered by solar energy in New Jersey is 15 times greater than its value in California.
- New Jersey was also the state hardest hit by Superstorm Sandy, and is moving forward with great determination to make the infrastructure changes mentioned previously.
- Furthermore, New Jersey is served by the only grid operator in the country to offer the ancillary services contracts that can provide added revenues to offset the costs of making distributed renewable power with emergency power capabilities.

Perhaps it is fitting that the place that gave birth to photovoltaic technology should also be the place to lead our country to a renewable energy transformation.

What would a renewable energy transition do to our economy?

A recent study considered the value of providing solar energy as the sum of the internal savings to the current electric power industry and the external values measured in economic growth and the avoidance of the cost of environmental damage. The total attribute value of Solar is \$170 to \$224 per megawatt-hour compared only \$125 per megawatt-hour which is the current cost paid by ratepayers for the renewable energy attributes through the tradable commodity called SRECs. Eventually, the marketplace will recognize this difference.

The conclusion is that the added value of solar energy is now greater than its added cost, making every kilowatt-hour of solar power a bargain for ratepayers. We still need incentives to *monetize* these added values for solar generators, but they are not subsidies; they are a payment for value delivered.

Like Germany, New Jersey is poised to benefit economically from a renewable energy transition – except that we can better take advantage of our richer renewable energy resources, and of the lower technology costs and new revenue streams that have now arrived.

October 2013