

## **Clean Energy Technologies Will Create Waste**

**By Tony Nocito**

The birth of mitigating our dependency on oil and coal is here. We are rapidly developing energy saving and renewable-energy solutions that are about to transform our lives for the better, bringing a new era of limiting our dependency on fossil fuel, and creating less wastes when generating electricity. But inevitably through this period we will create other wastes, some hazardous.

These changes and growth in renewable-alternative energies will deliver a new era of efficient power generation and a new sector of jobs. Infrastructure building and renovations will have to take place, i.e. transmission lines and sub-stations will require modifications and upgrades and generating stations will be abandoned as retired assets, dismantled and the environmental hazards removed.

It is obvious that the cross over to clean energy will inevitably breed countless environmental clean-up projects. Utilities are notably plagued with many hazardous-waste products such as asbestos, Polychlorinated Biphenyls (PCBs), heavy metals, lead, cadmium, and chromium that will haunt them and us for generations to come if they are not permanently removed from our built environment (meaning buildings, facilities and landfills).

The companies that generate and release these hazardous wastes are being monitored by the Federal Environmental Protection Agency (EPA) who has become stricter in its enforcement of polluters, requiring a guarantee of financial assurance under Section 108 (b) of the Comprehensive, Response, Compensation, and Liability Act (CERCLA). In this section of CERCLA, companies must prove financial stability, long into the future, by acceptable financial vehicles with terms and language incorporated and approved by the EPA and enforced by the National Enforcement Initiatives for the clean-up of environmental hazardous. Therefore it is in their favor to seek out technologies that permanently remove these hazardous wastes from our built environment, which will lessen the financial burden.

The major problems that will develop from this era lay in the fact that landfill space is at a premium and landfill mining (digging up landfills to recycle the buried recyclables) is becoming a way to create landfill expansion. Also, the development of new landfills is becoming almost impossible, due to the ever present: Not In My Back Yard (NIMBY).

Hazardous waste destruction technologies are the future of the waste industry, just as clean energy technologies are the future of the utility industry.

Clean energy and zero waste, non-hazardous and hazardous, must be a vigilant effort. Our goal has to be the development, refinement and implementation of technologies that

can support these efforts. This is the best socially responsible sustainable environmental approach.

What will our children do to eliminate waste in their life?

It is up to our generation to set the ground work and emphatically pursue cleaner energy and zero waste technologies, educating the consequences of not continually finding better solutions for our environment, and most importantly, for the health of generations to come.