



Municipal Sustainability Using The “Natural Step”

The Natural Step (TNS) is a broad-based community education and development coalition designed to draw business, government and local councils to economic and environmental sustainability. In TNS, sustaina-

bility means to meet the needs of the present without compromising the ability of future generations to meet its own needs. TNS employs simple scientific principles and an operational framework based on case studies.

TNS’s framework encourages dialogue, consensus-building and systems-thinking (key processes of organizational learning). It creates the conditions needed to introduce new ideas and expand on practical possibilities.

Doctor Karl-Henrik Robèrt started the Natural Step in 1989 along with colleagues in the Swedish scientific community. Through a consensus process the group developed a set of “system conditions” for a sustainable society based on natural cycles. Communities adopting these principles can reduce operating costs and environmental risk and be pioneers in long-range planning.

The American Planning Association interprets the four Natural Step system conditions in terms of the following goals:

1. Reduce dependence upon fossil fuels, extracted underground metals and minerals.
2. Reduce dependence on chemicals and other manufactured substances that can bio-accumulate.
3. Reduce dependence on activities that harm life-sustaining ecosystems.
4. Meet the hierarchy of present and future human needs fairly and efficiently.

TNS philosophy holds that sustainability depends on leaving the earth’s crust intact. From fossil fuel extraction, to metallic mining, to greenhouse gases, we live with a catalogue of poisons in our air and water that affects all ecosystems. TNS encourages comprehensive metal and mineral recycling programs, a reduced dependence on fossil fuel and a halt to the use of toxins like PCBs, DDT, Freon and other destructive compounds that damage the food chain and the ozone layer.

Rampant ecosystem manipulation — overharvesting and destroying habitat — must be replaced with a balance between plants, animals and humans in order for natural replenishment of species.

Samples of TNS in action are hopeful. Sweden-based Electrolux Co. adopted TNS framework after it lost a multi-million-dollar deal because it did not offer a refrigeration system without chlorofluorocarbons (CFCs). The company

used TNS principles to phase out CFCs and won back that customer. But it didn’t stop at refrigerators. It has introduced washing machines that use 12 gallons of water instead of 45, and substituted canola oil for petroleum-based oil in its chain saws — all while reducing total energy consumption and hazardous waste. IKEA and Electrolux of Sweden have moved toward environmentally sensitive production methods.

In a sustainable society, people are not subject to conditions that systematically undermine their capacity to meet their needs.

“All human beings have intrinsic needs. The goal of the social system is to provide the opportunity for all to meet those needs, as a precondition to a dignified way of life for everyone. ‘What’ we do and ‘how’ we do it matters. To make decisions which take us toward this goal, in consideration of any policy, product, marketing or investment, we should always identify in advance the people who are going to be affected, taking the widest possible systems view. We should ask ourselves: ‘Would we like to be subjected to the conditions we create?’ In addition, the manner in which we make these decisions should allow for participation, be transparent, hold actors accountable and be honest.”

Community meetings in Wisconsin have been standing room only for Natural Step presentations. Mayors Irene Blakely of Washburn and Fred Schnook of Ashland — two of sixteen Wisconsin cities that have declared themselves “eco-municipalities” — joined with mayors from across the U.S. in calling for efforts to help halt climate change at the local level. The agenda includes planting trees, maximizing public transportation and cutting down on pollution. The Wisconsin Green Party has officially endorsed the eco-municipality and The Natural Step agenda. People are talking about rain gardens and barrels, composting, solar panels, bio-fuels, local organically grown food in schools and changing light bulbs.

Natural Step interns in the Chequamegon Bay area in Wisconsin knocked on 4,000 doors, talked with 1,800 people, and exchanged 1,300 light bulbs representing 96,000 kilowatt

hours of energy saved over one year, translating into accumulated savings of \$7,200 for the homeowners. It also represents 40 tons of coal saved and 100 tons of CO2 saved, based on usage estimates from the homeowners.

TNS works through local study circles, facilitator trainings, leadership team events, collective fundraising strategy and outlining goals.

A sustainable future requires finding a balance between economic, environmental and social capital.

Participate in reducing wasteful dependence on fossil fuels, underground metals and minerals, wasteful dependence on chemicals and unnatural substances, encroachment on nature and meeting human needs fairly and efficiently.

Check out The Natural Step at <www.naturalstep.org/com/nyStart>



Photo by John LaForge

Nukewatch volunteer Matt Blackwood converted his heavy duty 4X4 truck to run on waste vegetable oil.

Solutions: Biodiesel Vehicles Now Serving San Francisco

In November, the city of San Francisco completed the conversion of its entire array of diesel vehicles to biodiesel, a clean-burning and renewable fuel that reduces the fleet’s production of greenhouse gases.

The city is buying virgin soy oil from Midwest producers, and 100 percent of its 1,500 diesel vehicles are now powered by the vegetable oil, which also sharply reduces toxic diesel exhaust that is linked to the incidence of asthma and other respiratory illnesses.

Diesel conversion is part of the city’s plan to cut greenhouse gas emissions to 20 percent below 1990 levels by 2012.

The city also announced in November, a new project called SFGreasecycle, a program to collect fats and cooking oils from the city’s restaurants. Nathan Ballard of the Mayor’s office said, “We’re taking the grease that would have gone down the drain and turning it into biodiesel.”

Wisconsin Lawmakers Taken in by Nuclear Industry PR Machine

By John LaForge

With Republican Party leadership, the Wisconsin State Assembly is being courted by nuclear industry lobbyists and is working to repeal limits on new reactor construction.

Nukewatch is part of a coalition of environmental groups organizing to save the statute that requires that a solution to the nuclear waste dilemma be found before new reactors can be built here — and that new reactors be economical compared to alternatives.

Having failed for 25 years to pass these simple tests — no waste site has been approved and new reactors cannot compete with renewable energy and efficiency in meeting electricity demands — the industry is pushing the repeal measure, AB 346.

The Assembly’s Energy & Utilities Committee, chaired by Phil Montgomery, R-Green Bay, met December 18 to hear comments on the bill, which would, Montgomery said, “Send a message to Wall Street that Wisconsin is open to new reactor construction.”

Nukewatch joined representatives from the Citizens Utility Board, Physicians for Social Responsibility Madison, and the League of Conservation Voters, along with State Representative Chuck Benedict of Beloit (the bill’s lead opponent in the Assembly), in testifying against the measure.

We worked hard to counter the industry’s misleading propaganda by providing committee members with studies and reports from independent scientists. The League of Women Voters, Renew Wisconsin, the Sierra Club and the Wisconsin Public Interest Research Group also urged the Assembly’s Energy and Utilities Committee to reject the repeal.

Proponents of the repeal measure repeatedly used preposterous claims to help greenwash nuclear power.

Rep. James Soletsky, D-Green Bay, said the 1979 Three Mile Island reactor disaster was a “success of containment.”

In fact, 15-to-24 curies of radioactive iodine-131¹ and over 10 million curies of radioactive noble gases, including 43,000 curies of krypton-85,² were vented from the so-called “containment” building. Indeed, as the NRC later reported, several “deliberate but uncontrolled releases” were made to vent radioactive gases. Official airborne release estimates are just guesses, because there weren’t enough outside radiation monitors, half weren’t working, and a large number of them went off-scale.³ Approximately 400,000 gallons of radioactive cooling water that had leaked from the reactor were secretly dumped into the Susquehanna River, a source

of drinking water for nearby communities.⁴ Later, about 2.3 million gallons of radioactively contaminated cooling water were allowed to be “evaporated” into the atmosphere.⁵

Assembly Speaker Mike Huebsch, R-West Salem, testified “In 40 years of transports, the Navy has never had an accident with its high-level waste shipments.” On the contrary, the cover of this winter’s Nukewatch *Quarterly* shows one of the Navy’s waste casks on its side after derailing in New York State, September 22, 2005.

Committee Chair Phil Montgomery asserted that “new reactor designs will be capable of reprocessing waste fuel rods squeezing out 95 percent of the waste’s energy.”

On the contrary, reprocessing was abandoned by the U.S. in the 1970s because of technical dangers, the vast amounts of liquid high-level waste it produces and because of the bomb-building threat created by the extracted plutonium. Because of the millions of gallons of leaking and explosive liquid waste left from reprocessing, West Valley, New York, Hanford, Washington and Savannah River, S. Carolina have become radioactive national sacrifice areas.

My statement to the committee focused on three recent studies that show: A) elevated leukemia incidence in young people living near U.S. reactors;⁶ B) a correlation between the strontium-90 found in baby teeth and the incidence of cancer among children living near U.S. reactors;⁷ and C) a dramatic rise in infant mortality following the opening — and the subsequent fall in infant mortality rates after the closing — of nuclear reactors in the U.S.⁸ These are warnings against operating reactors, which Rep. Montgomery and others called “safe and clean.”

It is clear that many committee members are not aware that nuclear reactors are allowed to routinely vent radioactive tritium, iodine, krypton and xenon gases, as well as strontium-90 and other deadly isotopes in the course of everyday operations. This radiation escapes from their stacks and leaks accidentally into the secondary cooling water that is returned to the lakes and rivers from which it is taken.

Among the lawmakers who spoke, only Rep. Benedict condemned nuclear power’s dirty, dangerous and incalculably costly down side. “Wisconsin should invest in viable, cleaner renewable alternatives” to nuclear power, Benedict said. Conservation, efficiency, wind, solar, biomass and cogeneration, he said, are all preferable to “nuclear power’s dangerousness and unreliability.”

Presidential Hopefuls on Nuclear Power

In a survey of the remaining presidential hopefuls’ positions on nuclear power, only U.S. Rep. Cynthia McKinney (Green-Georgia) is explicitly against additional nuclear power. The others have been had.

From the field:

U.S. Representative Cynthia McKinney (Green Party, Georgia): “Not even considering the fact that we will never find a safe way to dispose of nuclear waste, we simply cannot guarantee the containment dome strength of any reactor in the world that will withstand a modern day jet crash or that key auxiliary buildings that house spent fuel pools could survive such attacks. ... Nuclear power is not green energy.”

Senator Hillary Rodam Clinton: “When it comes to nuclear power, I’m an agnostic. We’ve got two big problems: What to do with waste? And how do we afford to build and maintain nuclear power plants? If we can deal with those two big question marks, I’m not against it.”

Senator Barack Obama: “Nuclear power is one of the few emissions-free energy sources available to us. ... I am open to the use of nuclear power production as a transition to new energy technologies, but I think answers to a variety of safety questions, such as how we are going to transport and dispose of nuclear waste safely, are required.”

(To his credit, Sen. Obama did say Oct. 2, 2007 that if elected he would end production of fissile material for nuclear weapons, agree not to build new weapons and remove nuclear weapons from hair-trigger alert.)

Senator John McCain: “The fact is, nuclear energy is clean. It produces zero emissions in operations. It has the lowest carbon footprint and is, therefore, undeniably a valuable tool for reigning in greenhouse gas emissions both quickly and economically.”

As expected, the committee passed the repeal measure, January 22. The vote was 8-to-2, with Rep. James Staskunas, D-West Allis, and Rep. Josh Zepnick, D-Milwaukee, voting No. And while the bill will likely pass the full Assembly, Noah Seligman of Madison reports, “The good news is that ... a legislative aide in the Senate ... indicated that the bill will not move anywhere in the upper chamber.”

Urge your representatives to speak out against new nuclear reactor construction. — *Footnotes on page 8.*

— *A version of this article appeared first in several Wisconsin dailies.*

Take Action: Footnoted versions of the information in this pull-out section are available in paper and PDF format from Nukewatch, <nukewatch.com>. Please make use of the Fact Sheets to inform your legislators, friends and neighbors about the downside of nuclear power.