

# STRATEGIES FOR PROMOTING ENVIRONMENTAL BUSINESS

Green business has formidable obstacles in achieving an entrance into a market landmined with preferences, prejudices, and subsidies that work to the benefit of hazardous, polluting technologies that it must compete with. Following is a discussion of 3 strategies that can help foster environmental business: green money (alternative sources of capital); green purchasing (environmental product purchasing by major institutions and employers); and green taxes (changing the tax structure to eliminate subsidies for hazardous products). These are not the only strategies that can be employed, but individually and collectively, they will help drive the momentum necessary for green business development.

## Green Money Which Bottom Line?<sup>(1)</sup>



Shorebank Pacific Office Building

In a small fishing village in the Northwestern U.S., a unique financial incubator is being perfected, an environmental bank. Shorebank Pacific in Ilwaco, WA (a village of about 800 on the coast) is the headquarters for a largely homegrown experiment in socially responsible banking and community accountability.

The bank started slowly (some would say organically) in 1997 as a collaboration between Ecotrust, a regional non-profit organization with a track record of supporting economic development in the Pacific Northwest, and Shorebank Corporation, a Chicago-based bank holding company with a vanguard track record of community investment. Six of the 9 original staff were hired from the region and did not have a banking background; they were guided by 3 senior people with experience. Since many of the bank's loans were rural, it established its headquarters in a small fishing village. It has also established 2 loan production offices in Portland, OR, and Olympia, WA.

The bank's deposit base has increased from an initial \$4.5 million to \$46.6 million by the summer of 2002. About half of these deposits came within the last year as the bank expanded its marketing campaign. Shorebank Pacific offers services to individual and commercial-account holders, including savings, CDs, money markets, and business checking. It solicits depositors from around the country who are drawn to its mission to support businesses that help the environment or strengthen the regional community. The bank has several bottom lines, including environmental sustainability, community building, and leading by example, all while making a profit.

Lending targets include: 1) green real estate (brownfield redevelopment, urban infill to prevent urban sprawl, and mixed use development that reduces car trips); 2) local agriculture (organic farms, composting operations, food markets that support local farmers); 3) alternative materials and building design (solar buildings, green building and environmentally preferable consumer materials); 4) resource efficiency (alternative energy equipment manufacturing and installation, transportation alternatives such as car-sharing and rail); and 5) community stability (value-added businesses that employ the region's resources, such as fishing and sustainably harvested lumber milling).

Some of the projects that have received loans include: a locally owned and operated food store buying directly from small food producers; a 5-block mixed-use development near downtown Portland that is constructing green buildings at a former industrial site; a solar-designed office and warehouse for a local-area food bank; a furniture manufacturer using certified, sustainably harvested wood and plant-based finishes; and a closed lumber mill that reopened under new local ownership.

Other projects include a recycling company that uses reclaimed glass to make art products, tile, water filtration sand, and abrasive blasting material; another recycling company that reclaims and reuses old rails from train lines; an organic lawn care service; an organic farmer; an organic dairy; several seafood providers; and an innovative water filtration technology company.

The bank also tries to set an example of sustainability through its own practices and habits. Its new headquarters building was built using 85% recycled materials, including reclaimed old-growth fir from a demolished warehouse. Its Portland office is located in part of a restored warehouse that was built to green standards for energy, water, indoor air quality, and transit and pedestrian accessibility. The project recycled 98% of its construction waste.

Another goal is to help small businesses reduce their environmental impacts. Shorebank has a scientist on staff to help businesses become sustainable. While it is uncommon to have a botanist employed at a bank, part of the bank's mission is to steward "natural capital," and make sure businesses have natural resources to be sustainable in the long run. The scientist helps small businesses reduce utility use and material waste, as well as protect natural resources such as wetlands. The bank has a network of environmental consultants to aid in these evaluations.

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## Leading By Example

*Shorebank's green office building uses the same products and principles it finances in some of its loans.*



*Recycled beams from Port of Astoria (above); Doors from recycled wood (right); Pervious paving and native landscaping (bottom)*



The scientist also conducts a yearly evaluation of each loan to find how well it matches Shorebank's mission. While most lenders care predominantly about repayment, this bank also evaluates each loan for 5 other criteria: natural productivity; environmental compatibility; efficiency; community support; and impact on the landscape. Evaluation is done for the term of each loan, which is about 7 years. A summary of how the portfolio of loans complies is given to the depositors in Shorebank's annual report. The bank also audits itself to assess the resource use of its own employees.

Shorebank also has an independent sister company, Shorebank Enterprise Pacific, which provides funding for higher risks like community development projects and venture capital. It is currently capitalized at about \$8 million, with much of the funding coming from foundations.

Regarding the more conventional bottom line, Shorebank Pacific made its first monetary profit in the 3rd quarter of 2002. According to Laurie Landeros, one of the bank's staff, it could have happened sooner. But the effort was as much about developing the process and gaining regional support as it was to make money. Asked if the bank might consider expanding, say, to Austin, Landeros declined to predict when Shorebank would be in a growth mode. "But that doesn't prevent someone doing it there without us."

## Yankee Brains

Another interesting way to obtain money for environmental businesses is being pursued in the Northeastern

U.S. The Connecticut Clean Energy Fund (CCEF) is a clever funding mechanism devised when the state deregulated its electric utilities. Many of the states where deregulation has taken place have enacted "public benefit charges." These ensure continuation of programs that promote energy conservation, fund renewable energy, and assist low-income ratepayers. Connecticut has gone a step further, using public benefit charges to create a venture capital fund to assist in the development of businesses involved in renewable energy and fuel cells.

A small surcharge on each kilowatt hour of energy sold accrued about \$15 million in the year 2000. By 2005, the funding will grow to \$120 million.(1) This money will be invested in clean energy technologies that help state ratepayers. Most of the money will be spent in-state, either as grants or venture capital equity invested in firms that will potentially create employment by development or manufacture of these new technologies.

Companies in which the CCEF has specifically invested money include Energetech America (an American branch of an Australian company building wave power generation), enXco East Coast (a New England branch of an internationally recognized wind power developer), and Green Mountain Power (a national retail provider of renewable energy in states that have deregulated electric utilities).(2) In 2001, the Fund invested over \$9 million to clean energy businesses, and another \$7 million in grants for technology development.(3)

The CCEF is administered by an already successful "parent," Connecticut Innovations (CI). Begun in 1989 with state bond money, the non-profit investment fund awards bridge loans and venture capital to technology-related firms.(4) By 1995, it was so successful that its royalties allowed it to operate independently of state funding.(5) Since 1996 it has invested \$81 million in over 128 Connecticut companies in the fields of information technology, biotech, photonics (applied optics), and environment, including clean energy production.(6)



*Renewable energy companies that the Clean Energy Fund has invested in include Energetech, who is building several pilot plants to turn ocean waves into electricity. (Artist's rendering.)*

The entrepreneurs that receive money from CI are not exclusively funded by it; these new companies receive money from other investors and venture capital firms. Some have been successful enough to go public or sell their going concerns to larger companies.

Before 1996, firms that received business investment would generally pay the state back in royalties. CI's practice since then is to hold equity in the companies, to be paid back when the firm is sold at a profit or makes a public stock offering. In 2000, CI had a 40% return on equity, and much of its profit is recirculated into more investments.(7) Its profits also allow it to fund 3 non-profit scholarship or educational efforts. It should be noted however, that its profits were greatly reduced in 2001, as were many private venture funds.(8) Like any conventional business, CI must ride out the business cycle. But during slow economic times, its value to the community becomes all the more important, as many sources of conventional seed capital have dried up.

Awards to renewable energy companies must be approved by the appointed advisory board of the Clean Energy Fund, and an energy-related subcommittee of CI board members. The board members of the Clean Energy Fund include representatives from academia, a utility regulatory agency, energy-related businesses, and environmentalists.(9) CI board appointments include members of the business and finance communities, and the President of the state AFL-CIO.(10) Most of the two boards are appointed by various elected officials, though some are government agency employees. The CI and CCEF managers and board members frequently serve as advisors or as board members of the funded companies' directors.

Interestingly, CI has several other economic development funding mechanisms. Although these specific programs are not generally applied to environmental technologies, there is nothing to prevent the strategies behind them from being used for green products and services.

These CI programs include the Yankee Ingenuity Technology Competition, which awards money to Connecticut universities that assist state businesses with product development.(11) In 2001, over \$3 million was invested for this purpose. There is also a BioScience Facilities Fund, which provides financing to eligible biotechnology companies for construction of laboratory and related space. To date this lending fund has financed almost \$13 million worth of facilities.(12)

In Central Texas, this type of program can help foster a regional alternative energy research and business sector. The combined population of Austin, San Antonio, and the Lower Colorado River Authority service area surrounding these cities is as large as Connecticut, and could generate similar revenues from electricity surcharges.

## The Anchor Market *Environmentally Preferable Purchasing*

The largest obstacle to products that help the environment is the market. Theoretically, if there were a demand, businesses would respond with product. But as discussed earlier, the market signal is thwarted by a number of things. There is usually no "price" put on environmental destruction from conventional products, and favorable tax subsidies for standard products also give them a competitive edge. As such, there is not sufficient market demand for environmental products to ramp up to economies of scale, which would cause prices to fall.

One way around this dilemma is for large businesses and governments to use their purchasing powers to create enough demand to lower the price. State and local governments alone spent more than \$385 billion on goods and services in 2000.(1) The gargantuan size of these entities guarantees volume discounts, and premium-priced environmental materials do not greatly affect their budgets. This strategy has gone international, best known as "environmentally preferable purchasing" (EPP).

Some might doubt that the Austin region, by itself, can make much of a difference in creating markets for environmental products. But Travis County's population exceeds that of 6 individual states in the U. S. The 3-county Austin region and the 4-county San Antonio region have a collective population in excess of 18 individual states! Think of the enormous combined buying power of this population. If a major portion of our region's purchases are green products, the volume we create will generally bring the cost of these products down through economies of scale.

The major employers in our area are essential if Austin wishes to have a noticeable effect on green markets. The green buying power of the city-state of Austin could be greatly aided by these companies and institutions. Six major government employers (Austin Independent School District, the City of Austin, the Lower Colorado River Authority, Travis County, the State of Texas, and the University of Texas), combined with 6 large private-sector employers (Advanced Micro Devices, Dell, HEB Food Stores, IBM, Motorola, and Seton Healthcare), represent 19% of all the jobs in the region.

These employers can buy more common green products, or even become an anchor market for new products. Major employers that are manufacturers can also integrate environmental materials into their products.

*The Environmental Directory* has conducted the first survey of product purchases of major employers in Austin to begin assessing the potential for environmental products.(2) It shows what has been done so far in this regard, and to a larger degree, what hasn't been done. The survey, and its results, are primitive compared to the full environmental audit that needs to be done for each employer. But it is a starting point.

	CITY OF AUSTIN	AISD	HEB	LCRA	SETON HOSPITAL	STATE OF TEXAS	TRAVIS COUNTY	UN. OF TEXAS	IRS
<b>ENERGY</b>									
T - 8	90%	67%	Almost all	Less than 5%	100%	5%-at remodeling	60%	46%	100%
T - 5	Demonstration	5%	Less than 2%	Less than 5%	No	No	No	1%	100% desk lamps
Electronic Lamp Switches	10% Interior; 80% Exterior	Less than 1%	60% Floor; 98% Exterior	No	No	60%	60-70% where applicable	Some	20% of building
Green Power	Provides but does not buy	No	No	No, but generates wind	Yes; Less than 10%	No	No	No	No
Onsite Renewables	PVs, Methane	No	No	No	No	No	No	Cogen.; no solar	No
<b>WATER</b>									
Cyclers	26%	No	100%	100%	No	Some; rare	No	No	Yes
Waterless Urinals	Demonstration	No	No	No	No	No	No	No	No
<b>PAPER</b>									
30% Recycled	99% office; 45% tissue/towel	Copier	100% of Towels	100% of tissue & office	No	59% Office paper	70 - 80%	56%	100%
100% Recycled	No	No	No	100% of towels	No	100% towel / tissue (95%)	No	No	No
Chlorine-Free	No	Towels	No	All towels and	No	No	No	No	No
Tree-Free	No	No	No	Less than 5%	No	No	No	No	No
<b>TRANSPORTATION</b>									
Rerefined Oil	In progress	No	No	No	NA	100%	100%	100%	NA
Plant-based Oil	No	No	No	No	NA	No	No	No	NA
Oil Purification	Testing	No	Yes	No	NA	No	No	NA	NA
Alternative Vehicles	7%	No	10% LNG	30%	NA	40%	20%	NA	NA
Hybrid Vehicles	1%	No	No	3, less than 1%	NA	No	No	NA	NA
Efficient Vehicles	NA	No	100%	60%	NA	No	Trucks	NA	NA
Telecommuting	1%	No	Less than 1%	Less than 5%	Small %	1%	2%	NA	1%
Carpooling	2% in alt. Trans.	No	Less than 1%	Pilot program	No, but intends to	No	Yes; no stats	0.3%	1%
<b>GREEN BUILDING</b>									
Low-VOC Paints/Adhesives	No*	60%	No	Almost all	1%	100%	90%	NA	100%
Plant-based Paints/Adhesives	No*	No	No	No	No	No	No	NA	
White Roofs	No*	75%	100%	100%	100%	No	Yes; no stats	NA	Yes
Recycled Carpet	No*	10%	No; little used	No	1%, but little used	75%	No	NA	No
Natural Fiber Carpet	No*	No	No; little used	No	No; little used	No	No	NA	No
<b>CLEANING</b>									
Laundry	NA	NA	NA	No	NA	0%	No; planning ozone laundry	No	NA
Ban of Dangerous Cleaners	No	Carcinogens	Carcinogens, cellusolve	Carcinogens	Yes; high VOCs	No	No	NA	Cellusolve
Plant-based Cleaners	No	10%	Less than 1%	25%	2 - 5%	NA	No	NA	50%
<b>AGRICULTURE</b>									
Organic	No	No	No	No	No	No	No	NA	No
Locally Produced	No	No	No	No	35%	Minor preference	No	NA	Less than 2%
<b>FURNITURE</b>									
Refurbished	No	No	Preferred; no	No	80%	40% (recycled)	10%	NA	No
Sustainably Harvested Wood	No	No	No; little used	No	NA	TPWD plans to	No	NA	No
Formadehyde-Free	No	No	No	No	NA	No Policy	No	NA	100%

\* The City of Austin has a voluntary greenbuilding standard but no specific requirements.  
HEB survey relates only to store operations, not grocery sales.

First, it should be noted that Advanced Micro Devices, Dell Computer, IBM, and Motorola categorically refused to participate in the survey. As there was nothing in the survey that asked about their proprietary processes in manufacturing, the author can only assume the answers were not very flattering to the company. Another, the University of Texas, was difficult and needed several inquiries. It simply does not keep centralized records, which will work against it if the institution tries to implement a university-wide program.

Of the responses that were given, no one jumped out as a leader. Most of these entities took some kind of positive environmental action in the areas of energy, water, or recycled paper. But as the questions got into newer or more advanced technologies, positive action dwindled. For instance, most respondents used energy-efficient "T-8" fluorescent lamps that save 14% on energy. But few used newer "T-5" lamps that save 34%. Most bought recycled paper with at least 30% post-consumer material. But few used recycled paper with 100% post-consumer content, or chlorine-free paper, or treeless paper.

Almost none of these major employers bought "green power" from renewable energy from the City of Austin municipal utility, including City of Austin municipal buildings. Several of the employers were making progress in energy-efficient and alternative-fuel vehicles, but almost no one used "by-pass" filters to eliminate oil changes, and no one used plant-based lubricants instead of petroleum. Promotion of carpooling and telecommuting as alternatives to save car trips by employees was in its infancy.

Simple building products like low-fume paints and light-colored roofs that save energy were somewhat common, while plant-based paints and recycled carpet were largely ignored.

Regarding cleaning products, at least 5 major employers surveyed avoided certain things like carcinogens, but only small percentages of safer, plant-based cleaners were used instead of products that are petrochemically based. There were no alternative laundry technologies used by companies that had uniforms laundered for their employees.

Purchase of organic food was totally ignored, and only 2 employers even considered purchasing food that was locally grown.

Recycled/refurbished furniture was purchased by 4 of the employers surveyed, but only one bought furniture made of wood that is sustainably harvested or has cushioning free of carcinogenic formaldehyde.

## The Competitive Green Edge

In the U.S. and Japan, certain corporations have led the way in EPP.

- DaimlerChrysler, Volvo, Sony, and Canon have black-

lists of chemicals that are either severely restricted or banned in their operations. The Body Shop skin and cosmetics manufacturer and retailer avoids the use of PVC plastic packaging.(3)

- Ben & Jerry's, the ice cream maker and retailer, sells its products in cartons made of chlorine-free paper, and buys milk for its products that is free of bovine growth hormone because of health and animal cruelty concerns. Its ice cream shop employees wear an environmental "uniform," a T-shirt made with organic cotton. The company has encouraged its berry supplier to ship with reusable containers.(4)

- In an effort to improve indoor air quality, increase safety, and reduce costs, Perrigo (the pharmaceutical company) began using least-toxic cleaning products. Since it reduced the number of products used and bought them in bulk, the cost savings amounted to \$35,000 a year.(5)

- The McDonald's fast food chain has become the premier purchaser of recycled materials and supplies. Though it was originally pressured into this by activist campaigns in the late 1980s, the company has gone well beyond treating recycled commodities as a public relations ploy, spending \$350 million a year on products including dining trays, construction materials, chairs, tables, carpeting, insulation, play ground equipment, tiles, napkins and other paper products, and packaging. The chain has also converted 50% of its restaurants to energy-efficient lighting systems. (Now if it would just do something about the food.)(6)

- Collins & Aikman has drastically reduced VOC outgassing from its floor products. Its purchase of recycled-content products includes about 20% of its general office supplies and 75% of its paper supplies.(7)

- Several departments at Warner Brothers purchase environmentally preferable products including paper, janitorial supplies, construction materials, transportation products, and computers.(8)

- The Body Shop, Anheuser-Busch, Ben & Jerry's, Canon, Collins & Aikman, Herman Miller, and Sony rate their preferred suppliers on environmental criteria.(9)

Even more leaders are found in various levels of government.

Possibly the best example of environmental purchasing is the Renewables Portfolio Standard (RPS). Sixteen state governments have mandated that electric utilities within their state purchase renewable energy as part of their power mix.(10) Eight of these states, including Texas, specify this in specific power production requirements or percentages of power production. Although the percentage of required renewable purchase in Texas is small, the state uses so much electricity that its RPS standard has had a marked effect: one-half of all wind power built in the U.S.

in 2000 was in Texas.(11) Collectively this guaranteed market is meant to give renewable energy a foothold to higher production and lower prices.

The states of Vermont and Massachusetts purchase least-toxic cleaning products.(12) The states of Iowa and Michigan require their departments to purchase plant-based lubricants such as chainsaw oil for use in environmentally sensitive areas.(13)

Smaller regional efforts have also made their own contributions.

- The vehicle maintenance operation for Lee County, FL, eliminated its entire volume of hazardous waste disposal through a series of best-practice efforts that included avoiding high-VOC products, replacing chlorinated brake fluid with unchlorinated brake fluid, replacing aerosol cans with air-pressurized dispensers, and segregating waste streams for better recycling. The operation is now saving \$17,000 a year in disposal costs.(14)

- The Association of Bay Area Governments (in San Francisco, CA) adopted an anti-dioxin resolution encouraging member governments to avoid dioxin-containing products, encouraging the alternative purchase of products such as chlorine-free paper and PVC-free plastics.(15)

- The Cincinnati, OH, Highway Maintenance Division switched from solvent-based paints to water-based paints for highways.(16) The City of San Francisco mandates that its operations use an approved list of least-toxic pesticides.(17)

- In July 2000, Chicago, Illinois, and 47 other nearby government bodies announced they would begin purchasing about 400 megawatts of electricity as a group. Twenty percent of the power must come from clean, renewable sources such as solar or wind. (Interestingly, even though the City of Austin's electric utility has been aggressively marketing green power, the City government did not begin to purchase it for its own buildings until late in 2002 when this author began to publicly point out the double standard.)(18)

The effectiveness of the efforts cited above can be magnified if government mandates or purchases concentrate on a specific product or process. In essence, one institution or region can become an "anchor" customer that enables economies of scale for an environmental technology until the price is low enough for it to better compete in the marketplace.

The best example of environmental product development at the local level is the photovoltaic development program at the Sacramento (CA) Municipal Utility District.(19) Rather than make sporadic purchases that can actually drive up the cost by spiking demand, the utility has financed the "sustained orderly development" of PVs by investing a specific amount of money per year. This

money is leveraged with other public agency funding and non-governmental funding from businesses and individuals to stretch the buying power even further. Long-term contracts have been made, with a manufacturer guaranteeing purchase in exchange for annually decreasing costs and a factory located in the region. While this process has not always worked smoothly, the utility's PV costs are the lowest in the U.S., with the cost falling 50% in the 7-year period between 1993-2000.

Another local example is the purchase of environmentally preferred paper by the City of Portland's Bureau of Environmental Services. The agency has promised to be an anchor market for chlorine-free, 100% recycled paper from a regional mill, and this agreement is expanding to other City departments.(20) Again, the agency is doing this with the expectation that economies of scale will bring the cost down, though there is not a contract in place for this.

Another example, this time national, is the Pentagon's purchase of plant-based (castor bean) paint, giving a large order of 20,000 gallons to the inventor in his initial stage of manufacturing.(21) (See Southern Diversified Products under "Choosing Low-Toxic Paints" in the Green Building section.)

## Tax Toxics, Not People Green Taxes

The growing concept of environmentally based taxes is another way to further green businesses. Since the conventional marketplace does not usually charge for environmental damage, and since environmentally damaging materials and practices often receive tax subsidies, taxing based on environmental effects can help level the playing field. Green taxes can also raise money for environmental programs, and in some cases offset and lower taxes on wages, property, and purchased goods.

It is practiced to a minimal extent in Austin. Residential cars and commercial parking lots are charged a "transportation fee" that supports street cleaning. Small charges on electric, water, and solid waste disposal bills support conservation and recycling, creating monetary savings by avoiding new power plants, water plants, and landfills.

There are examples of this in the federal government, such as the tax on gasoline. Until recently, the Superfund tax on chemical manufacturers to clean up contaminated waste sites was making great progress, though this tax has been terminated. But green taxes contribute a small share of U.S. government revenues. The concept is farther along in Europe than in the U.S. The Netherlands gets 15% of its government revenue from green taxes; Finland gets 12% from this source.(1)

The topic is large and can cover every conceivable product and process. To focus on the subject, let's take a good (or bad) example, the automobile. There is probably no other technology that is more hazardous to the environ-

## AUTO ADVANTAGES & SUBSIDIES IN THE U.S.

Taxes Breaks*	\$13 billion between 1996-98
National Security	\$20-40 billion in 1996
Environmental Externalities	\$46-688 billion in 1991
Government Infrastructure	\$21.5-79 billion in 1991
Political Contributions	\$51 million in 2000

\*Large companies only

ment, more damaging to international security, or more subsidized by the American taxpayer.

In a study of the taxes paid by the top 250 U.S. corporations between 1996-1998, auto manufacturers received tax breaks that made their rate 21% below the average effective tax rate that American corporations pay, and 51% below the nominal rate they are supposed to pay.(2) The oil industry that fuels these cars had the lowest tax rate of any major industry, 43% below the average rate corporations pay, and 65% below the nominal rate for U.S. corporations.(3) Between 1996-98, the 19 largest companies in these 2 industries received a total of \$13 billion in tax breaks.(4)

The money our country pays to protect this oil is an even larger hidden subsidy. In 2001, 14% of U.S. oil came from the politically unstable Persian Gulf, where 2/3 of the entire world's future oil reserves are located. At least 3 recent conflicts, the Iran-Iraq War, Operation Desert Storm, and the recent Afghan War were partially or totally linked to oil politics. National security costs to defend Mid-East oil were as high as \$40 billion in 1996, meaning we paid \$69 to protect a barrel of oil that costs \$24 to import.(5)

Damages to health and property from threats such as asthma attacks, lung cancer, and acid rain were almost \$700 billion in 1991.(6) Government-supported infrastructure subsidies, from highways to traffic cops, were as high as \$79 billion in the same year.(7) The auto and oil industries maintain their subsidies in no small part due to the enormous political contributions they give to Congress – \$51 million in the 2000 election cycle.(8) This is a steal given the huge “rate of return.”

Supposing a local city or county wanted to levy green taxes on cars to obtain adequate funding for road maintenance, to support mass transit and bicycles, or to start a rebate program for energy-efficient cars. Theoretically, any government should be able to protect the health, security, and money of its citizens. And green taxes might be more common if this theory held, but state or federal preemptions and implementation problems can make green taxes difficult or impossible to levy. Green tax options that might be viable are discussed below, along with barriers to their implementation.

Property Tax - Texas law allows local jurisdictions to collect *ad valorem* property taxes on personal vehicles, airplanes, and motor boats. At one time, the City of Austin did this. But most tax collection agencies in Texas have phased out this practice because it is easier and less expen-

sive to collect taxes on immovable assets like real estate. But 99 taxing jurisdictions in 23 counties in Texas still collect auto taxes.(9)

Interviews with 2 of these show a practice of aggressive collection on later-model cars since older cars have less value.(10) This mitigates the effect such a tax would have on lower-income taxpayers.

A partial estimate by the *Environmental Directory* of tax revenue accruing to the City of Austin and Travis County for cars purchased in 2002 alone would be about \$9 million, with another \$16 million for school districts.(11) Used cars would yield at least \$9 million for the City and County, and another \$16 million for school districts.(12) This does not include 81% of vehicles older than 2002 (for which there is no accurate data.) It also does not include commercial trucks, motor cycles, RVs, airplanes, and boats. Not all of this money would be “profit,” due to collection costs, but the possibility of lowering real estate taxes and raising money for environmental programs is worth investigation.

Truck Road-Maintenance Tax - Another tax that is currently collected on a small scale in Austin is a fee for solid waste trucks in the private sector. This is collected in lieu of a franchise fee allowed under state law, and is justified by the amount of wear these trucks place on roads. In 2000, this fee gained the City \$189,000 in revenue.(13) The state does not allow this fee to be collected on other trucks at this time, so it would require enabling legislation. Expanding this fee to all large trucks would yield the City another \$4 million.(14)

Gasoline Tax - In Texas, drivers pay 38.5¢ per gallon in federal and state taxes on gasoline, 26% of the retail price (at \$1.50 per gallon). The U.S. collects a lower gasoline tax than any other industrialized country. In some European countries, fuel can cost over \$4 per gallon, due in large part to taxes.(15)

A City gas tax would defray many of the costs for traffic that are currently covered by property taxes. A penny tax per gallon would yield about \$4.6 million for Austin.(16) But the City will need state authorization to do this, and probably voter authorization as well. No attempt has been made by the City of Austin to attain this enabling legislation in recent history.

Car Fee Modification - The City currently has a transportation use fee on its utility bill that supports street cleaning. Increasing this cost would allow money for watershed protection from car fluids such as oil, as well as road maintenance. But at least as it pertains to watershed protection, such a levy would need state authorization.

Pollution Tax - Taxing vehicles to fund clean air programs is an idea whose time has been delayed. Theoretically the state of Texas has done this. In the 2001 Texas Legislative session, the government passed Senate Bill

5.(17) As originally proposed, it levied fees on vehicle inspections, taxis, and fees on people living in areas in danger of exceeding federal air-quality standards. This money would have gone for rebates on new low-emission vehicles and internal-combustion equipment, as well as research and development of new emissions technology.

However, political maneuvering placed most of the taxes to fund clean air programs on new residents moving to Texas. This was ruled illegal by the courts, greatly reducing the amount of money collected. As such, the program has been only marginally effective.

It would take state authorization for the City to continue this effort unilaterally. A \$10 tax on all private vehicles registered in Travis County would amount to about \$7 million.(18)

Hazardous Waste Fee - Auto lubricants and fluids are currently taxed by the state, with the taxes used for road maintenance. It would take state authorization for the City to implement its own tax, but the rewards would be noticeable. A 25¢ tax per gallon of engine oil would yield almost \$900,000 for the Travis County area.(19)

Commuter Taxes - Modern suburbs are subsidized with cheap gasoline. This allows the residents to work in a city and escape taxes that pay for its security and infrastructure. Taxing out-of-city workers is a way of recouping some of these costs.

The most prominent example where this has been successfully pursued is New York City, which had a commuter tax from 1966 to 1999, when political pressure from commuters resulted in a state law to repeal it.(20) In the wake of the 9/11 attacks and the national recession, the Mayor of New York is now proposing the tax's reenactment to make up for shortfalls in the city budget.(21) Several cities in Pennsylvania are also employing the strategy to stave off fiscal problems.(22)

This is the most controversial of all green taxes discussed here. It might need a Constitutional amendment to enact it, with suburbs lobbying to never let it get that far. But congestion pricing, discussed below, is more legally feasible and socially accepted and accomplishes some of the same goals.

Congestion Pricing - Similar to phone rates and commercial electric costs, congestion pricing charges road users based on the time of day. Rush hour on a weekday can be 10 or 20 times the cost of late night/weekend driving. Buses, vans, and carpools that split rush hour fees among numbers of people cost less than single occupancy vehicles.

The concept was first tried on a 14-mile stretch of freeway in Orange County, CA, in 1995 with incredible success.(23) Several bridges connecting New Jersey to New York City also employ it.(24)

Travis and Williamson counties have recently set up a Regional Mobility Authority to manage the new toll highway SH 130, which can employ congestion pricing. Theoretically, the option for the Austin region to implement congestion pricing is not limited to new toll freeways. Austin has the option to implement congestion-pricing tolls on existing freeways or retrofit these freeways with new toll lanes. Technically, it even has the authority to implement such a program on its major streets.

Frequent travellers on these freeways have radio signal devices or bar codes on their car for speedy entrance to these roads, which automatically calculate toll bills without the hassle of toll booths.

The city of London is in the process of enacting such a tax within a certain region, taxing drivers who enter the central city on a daily basis.(25) This tax will encourage alternate forms of transportation and provide funding for them as well. The daily monitoring will be done by digital cameras taking pictures of license plates and then mailing tax bills to the owners of the identified cars. People who live within the monitored area will receive a 90% discount. Exemptions will include the disabled, emergency services, motorcyclists, minicabs, school buses, and public transport.

\* \* \* \* \*

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*ing subsidized polluting ones. The cleverest of political skills will be necessary to outmaneuver the preferential taxes and subsidies given to dangerous technologies so that green products can compete on a level playing field.*

*And what kind of marketing genius will it take to sell green products to a public that is in many ways unaware of the environmental hazards it faces everyday? You would think it wouldn't be hard, because all that is being "sold" is survival. But the majority of people don't see the danger.*

*This article was written as a primer on how Austin's economy can diversify using environmental business in the wake of widespread layoffs in its computer industry. I hope that readers will be informed and inspired by it.*

*But ultimately, the wish to see a city of heroes emerge comes down to the individual and collective actions of consumers, voters, businesses, and governments. It's not a fairy tale where things end happily ever after. It's a day-to-day effort that can begin right now. Close your eyes, take a deep breath, smile, and get to work.*

## Which Bottom Line

1 Telephone interviews with Laurie Landeros, EcoDeposits Manager with ShoreBank Pacific, on October 2, 2001 and July 24, 2002, and interview and written information from Kathleen Sayce, Bank Scientist with ShoreBank Pacific, on July 24, 2002.

## Yankee Brains

1 From Connecticut Clean Energy Fund Website: [www.ctcleanenergy.com/](http://www.ctcleanenergy.com/).

2 Clean Energy Fund Press Releases:

“Wave Energy Development — A Reality for Connecticut,” December 10, 2001.

“Connecticut adds Wind Energy to its Renewable Energy Ventures,” November 27, 2001.

“Connecticut Clean Energy Fund Invests \$2 Million in Green Mountain Energy Company,” April 16, 2001.

3 Connecticut Innovations, *2001 Annual Report*, Rocky Hill, CT, 2001, p. 17.

4 Ibid., no specific page.

5 From Connecticut Innovations Website: [www.ctinnovations.com/site/about/about\\_us.asp](http://www.ctinnovations.com/site/about/about_us.asp)

6 Telephone interview with Gail Palmer, Managing Director, Marketing and Business Development at Connecticut Innovations, on July 30, 2002.

7 See footnote 3, p. 3.

8 Ibid.

9 See footnote 1.

10 See footnote 3, p. 21.

11 See footnote 3.

12 See footnote 3, p. 28.

## The Anchor Market

1 U.S. Environmental Protection Agency, Environmentally Preferable Purchasing Program, *Private Sector Pioneers, How Companies Are Incorporating Environmentally Preferable Purchasing*, EPA742-R-99-001. Washington, DC:

U.S. Environmental Protection Agency, June 1999, p 1.

2 This survey was compiled largely from a written form with verbal follow-up when necessary. The following organizations and people participated.

City of Austin (dated December 12, 2001):

Vince Cobalis, Assistant Director, Austin/Travis County Health and Human Services Dept.;

Rick Fudge, Supervisor Senior Buyer, Purchasing Dept.;

Rosemary Ledesma, Senior Buyer, Purchasing Dept.;

Terry McGee, Senior Contract Compliance Specialist, Public Works;

Monica Meuth, Administrative Assistant, Purchasing Dept.;

Clifford Nixon, Vehicle Acquisitions Manager, Purchasing Dept.;

Kim Peterson, Manager, Employee Relations;

Also from City of Austin:

David Acuna, Administrative and Finance Manager, Building Services division of Financial Services Dept., undated;

Fred Blood, Sustainability Officer, Transportation, Planning & Sustainability Dept., ongoing in 2001 and 2002.

Tony Gregg, Water Conservation Manager, Transportation, Planning & Sustainability Dept., December 18, 2001;

Clifford Nixon (see above), December 19, 2002;

Fred Yebra, Manager, Commercial Energy Management Services at Austin Energy, undated.

Austin Independent School District: Paul Turner, Director of Administrative Support Service, November 30, 2001.

HEB: Reagan Wagner, Environmental Affairs Project Leader, October 9, 2001.

Lower Colorado River Authority: Elizabeth Williams, Business Policy Procedure Lead, January 2, 2002.

Seton Healthcare Network: Gayle Granberry, Director of Communications, November 2, 2001; supplemental answers from Patricia Fortenberry, Construction Project Coordinator, undated.

State of Texas: Lorrie Phillips, RMDB/Special Projects Coordinator for Texas Building and Procurement Commission, November 2, 2002

Travis County: Cyd Grimes, Purchasing Agent, October 1, 2001.

University of Texas: Margo Iwanski, Executive Assistant to the Vice President, “Response to request for information,” dated February 13, 2002.

Internal Revenue Service: Reginald B. McFadden, Director, Submission Processing Center, March 15, 2001.

3 See footnote 1, pp. 15-16.

4 Ibid., pp. 16, 33.

5 Ibid., p. 17.

6 Ibid., pp. 20, 23.

7 Ibid., pp. 16, 21.

8 Ibid., p. 24.

9 Ibid., pp. 30-33.

10 Information from North Carolina State University Solar Center's Database of State Incentives for Renewable Energy (DSIRE) Website: [www.dsireusa.org/](http://www.dsireusa.org/).

11 Telephone interview with Kathy Belyeu, Strategic Communications Director at American Wind Energy Association, on April 30, 2002.

12 Information from U.S. Environmental Protection Agency Environmentally Preferable Purchasing Program Website: <http://yosemite1.epa.gov/oppt/eppstand2>

13 Nelson, Jessica, "Harvesting Lubricants," *The Carbohydrate Economy*, Minneapolis, MN, Vol. 3, No. 1, Fall 2000.

14 U.S. Environmental Protection Agency, *Environmentally Preferable Purchasing Program, State and Local Government Pioneers, How State and Local Governments Are Implementing Environmentally Preferable Purchasing Practices*, EPA742-R-00-004. Washington, DC: U.S. Environmental Protection Agency, November 2000, p. 18.

15 Ibid., p. 11.

16 Ibid., p. 37.

17 Ibid., p. 35.

18 Ibid., p. 11.

19 Osbourne, Donald, *Sustained Orderly Development and Commercialization of Grid-Connected Photovoltaics: SMUD as a Case Example* (presented at the 2001 World Sustainable Energy Conference). Sacramento, CA: Sacramento Municipal Utility District, March 2001.

20 Telephone interview with Margaret Nover, Program

Manager with City of Portland, OR, Bureau of Environmental Services, on July 10, 2001.

21 "Researchers Create Ecofriendly Paint From Castor Oil," *In Business*, Summer 2001, p. 4.

## Green Taxes

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2 McIntyre, Robert, and T.D. Co Nguyen, *Corporate Income Taxes In the 1990s*. Washington, DC: Institute on Taxation and Economic Policy, October 2000, p. 5.

3 Ibid.

4 Ibid.

5 See footnotes 9 and 10 in Auto Section.

6 Delucchi, Mark, *The Annualized Social Cost of Motor-Vehicle Use in the United States, based on 1990-1991 Data*, UCD-ITS-RR-96-3 (1). Davis, CA: University of California, Davis, Institute of Transportation Studies, June 1998, Table 1.8.

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8 From Center for Responsive Politics Website: [www.opensecrets.org/industries](http://www.opensecrets.org/industries).

9 State of Texas Comptrollers of Public Accounts, "Taxation of Non-Income Personal Property (Section 11.14), 2000/2001 CAD Survey," Austin, TX, computer run dated June 11, 2001.

10 Telephone interviews on June 18, 2002 with Dwayne Cox, Chief Appraiser, for Hemphill County Appraisal District, TX, and Sharon Scott, Chief Appraiser of Falls County Appraisal District.

11 The number of new cars in Travis County provided by Diane Emrick-Dodson, Operations Branch, Vehicle Titles and Registration Branch, Texas Dept. of Transportation, on December 6, 2002.

New car sales value of \$22,250 for 2002 from telephone interview with Tom Webb, Chief Economist with ADT Automotive, on January 10, 2003. The estimate does not include tax income from large trucks, motor cycles, RVs, boats, and planes.

12 Used car sales value of \$8,656 for 2002 from telephone interview with Tom Webb, Chief Economist with ADT Automotive, on January 3, 2003.

Estimated by the percentage of U.S. light vehicles sold each year in Travis County from ratio of total used light vehicles sold in U.S. compared to total national light vehicle fleet. This is then applied to Travis County number of light vehicles. This represents only 19% of the fleet older than the 2002 model year. No reliable numbers exist for the rest of the national fleet's monetary value.

13 Information from Rusty Cobern, Utility Financial Planner with City of Austin Solid Waste Services, on August 12 and December 10, 2002.

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2002.

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