



The Green Economy Is the Future

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We Confront Monumental Challenges

- all biological systems collapsing: fish catch plummeting, deforestation, species destruction, topsoil eroding, glaciers and polar ice caps melting, ocean levels rising, etc.
- Peak Oil? Peak Water? Peak everything?
- People will feel the climate crisis in their daily lives as energy prices go up, droughts cause water rationing and higher water bills, weather instability and coastal erosion push up insurance rates, etc.



This Crisis Presents an Opportunity

- Environment crisis makes it easier to recruit people to “conservation economics” . . .
- Transnational corp.s have 3 built-in flaws: not rooted in place, not green, not democratic. Solution? Local green economy.
- “Triple-bottom-line” model—social justice, environment restoration, and financial sustainability—will beat the single-bottom-line model. • First global revolution . . .



LOHAS Market

Lifestyles of Health & Sustainability Sectors, 2006

<u>Ecological Lifestyle</u>	<u>Sustainable Economy</u>	<u>Alternative Healthcare</u>	<u>Healthy Lifestyle</u>	<u>Personal Development</u>
\$81.90 billion	\$76.47 billion	\$30.70 billion	\$30.00 b	\$10.63 billion
<ul style="list-style-type: none"> • Ecological home & office products • Organic & recycled fiber products • Environmentally friendly appliances • Eco-tourism & travel 	<ul style="list-style-type: none"> • Green building & industrial goods • Renewable energy • Resource-efficient products • Socially responsible investing • Alternative transportation • Environmental management 	<ul style="list-style-type: none"> • Health & Wellness solutions • Acupuncture, Homeopathy, Naturopathy • Holistic disease prevention • Alternative medicine 	<ul style="list-style-type: none"> • Natural organics nutrition products • Food & beverage • Dietary supplements • Personal care 	<ul style="list-style-type: none"> • Mind, body & spirit products, such as CD;s, books, tapes, seminars • Yoga, fitness, weight loss • Spiritual products & services

LOHAS Merchandise Trends

Classification	Growth
Building Products	+40%
Health and Beauty Aids	+25%
Organic Cotton	+20%
Organic Foods / Beverages	+30%
Eco-tourism	+40%
Apparel	+25%
Renewable Energy	+50%
Holistic Medicine	+25%
Resource-efficient Products	+25%
Autos (Hybrids)	+30%

TOTAL JOB CREATION FROM \$100 BILLION IN SPENDING

Green Recovery Program — 2 million jobs

Household Consumption

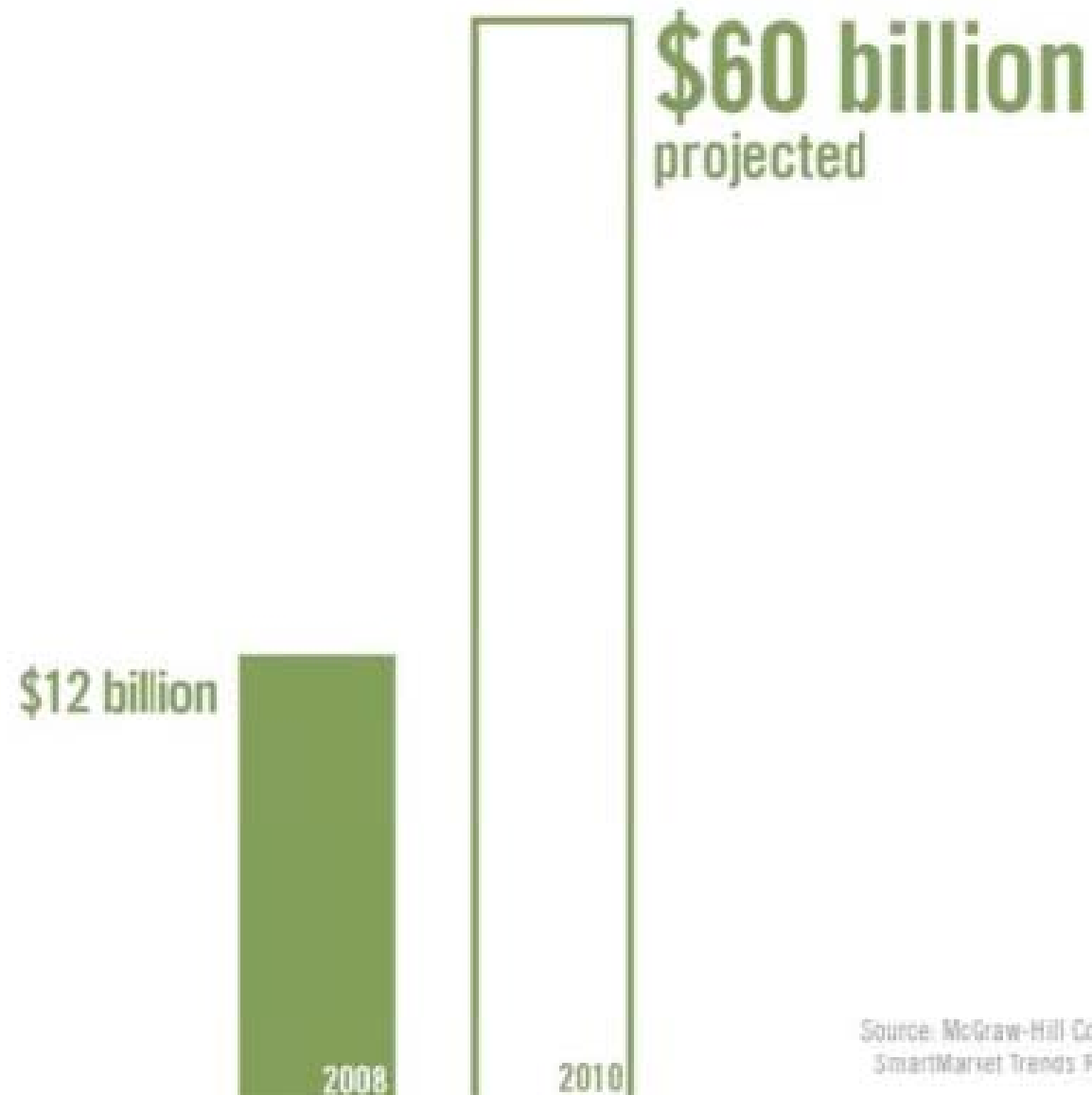
(tax rebate) — 1.7 million

jobs

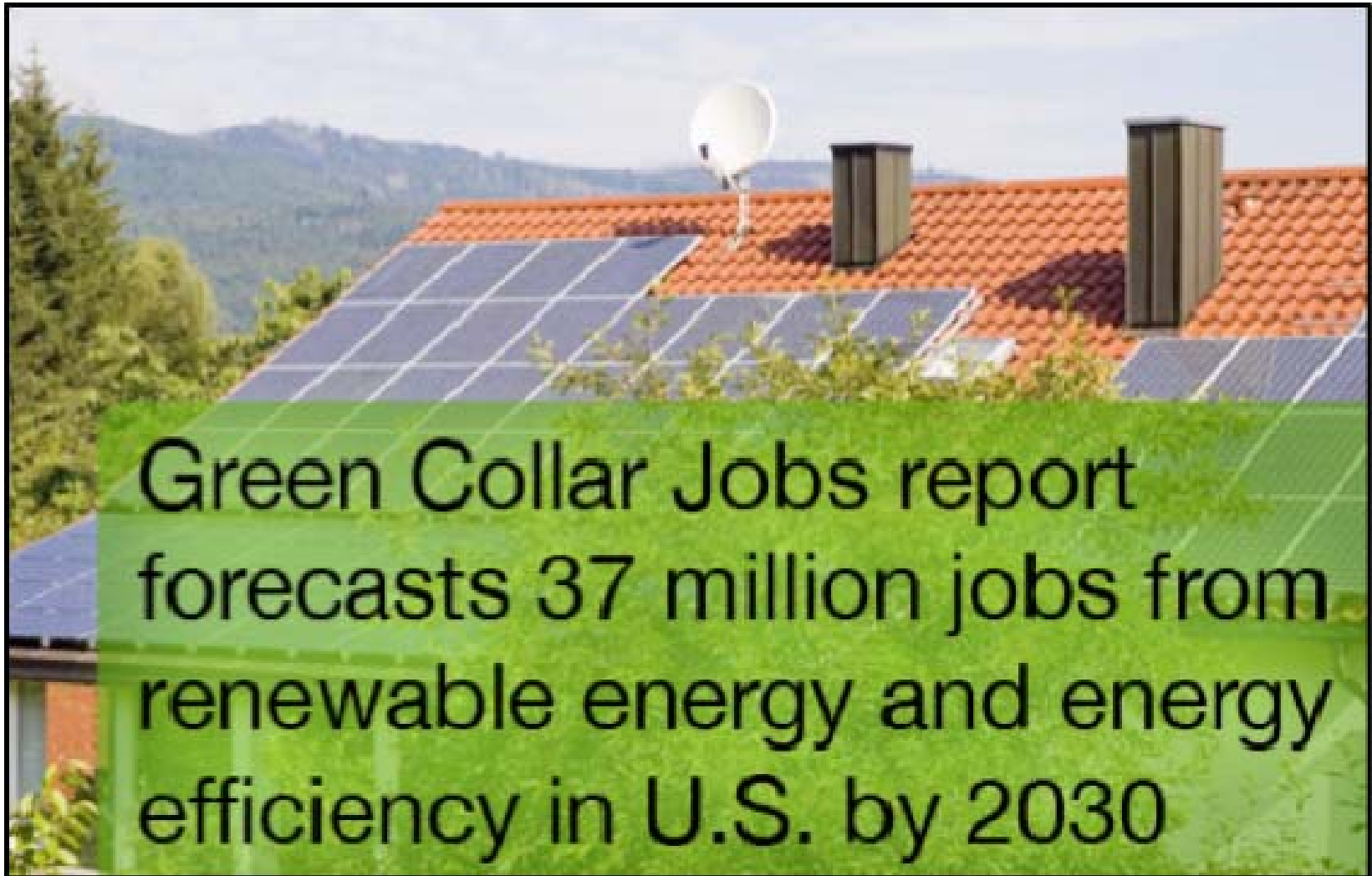
Oil Industry — 542,000 jobs

SOURCE: *Green Recovery A Program to Create Good Jobs and Start Building a Low-Carbon Economy*, Robert Pollin, et al., Department of Economics and Political Economy Research Institute (PERI) University of Massachusetts-Amherst & Center for American Progress, September 2008.

Green Building is in Demand



Source: McGraw-Hill Construction, SmartMarket Trends Report 2008



Green Collar Jobs report
forecasts 37 million jobs from
renewable energy and energy
efficiency in U.S. by 2030

Green Energy Is Growing Rapidly

- In 2006, nuclear power worldwide added less capacity than solar PV did, and one-tenth what wind power added. In 2007, the U.S., Spain, and China each added more wind capacity than the world added nuclear capacity, and the U.S. added more wind capacity than it added coal-fired capacity during 2003 to 2007 inclusive.

Green Energy potential is HUGE

- **Geothermal** energy is growing rapidly—96 power plants in development in 12 western states will double U.S. geothermal capacity.
- Carbon taxes will speed this shift .
- . .

Federal Policy Could Have a Huge Impact

If the federal government enacted a 20 percent renewable energy portfolio standard, requiring electric utilities to get 20 percent of their energy from renewable sources by 2030, it could:

- Create 500,000 new jobs;
- Save consumers \$128 billion through lower prices;
- and cut greenhouse gas emissions equal to taking 140 million cars off the road.

Retrieving Value from Waste

- “Urban mining”-- the process of extracting precious metals from cell phones--is one way to profit from “waste.” Old cell phones are a valuable resource. One metric ton of cell phones contains 140 kilograms of copper, 3.14 kilograms of silver, 300 grams of gold and 130 grams of palladium, according to Environmental Protection Agency (EPA) statistics.
- The Terra-Cycle story in our book . . .

Onion Fuel

Gills Onions (Oxnard), a national onion processor and distributor, has built an Advanced Energy Recovery System (AERS) that converts 100% of their onion waste into clean renewable energy and a high-value cattle feed. They use an anaerobic digester that contains bacteria from a beer brewery. The bacteria feast on the carbohydrates in the fermenting juice and produce combustible methane. The AERS creates enough methane biogas to power two onsite 300-kilowatt fuel cells, which operate the plant's refrigeration units and lighting. The AERS provides annual savings of \$700,000 in electricity costs, \$400,000 in disposal costs, and has led to more than \$3 million in government and power company incentives. The AERS eliminates up to 30,000 tons of carbon dioxide-equivalent emissions per year.

The Green Economy Will Continue to Grow Rapidly

- Google investing hundreds of millions of \$\$\$ into renewable energy (RE < C).
- Growing campus climate activism (Global Exchange is part of Energy Action . . .)
- Colleges competing to see who can be greener (chapter in *Building Green Economy*)
- Curriculum: Creating a Sustainability Plan for a Campus (www.globalcitizencenter.org)



Local Policies Going Green

- 850 cities in all 50 states have signed the Kyoto Protocols, despite U.S. federal govt. failing to do so (chapter in our book *Building the Green Economy*)
- City and state legislation getting the two “GREENS” to synergize . . .
- Los Angeles city govt. is spending \$57 million to retrofit 140,000 street lights with LED bulbs. L.A. will reduce CO2 emissions by 40,500 tons a year, and after the loan is repaid in seven years, L.A. will continue to save \$10 million annually as a direct result of this lighting retrofit project.



Government Going Green

- Salt Lake City captures methane at sewage plant and landfill, burning it to power the plants and reduce global warming pollution (interview w/SLC Mayor in our book)
- San Francisco's P.U.C. collecting waste grease for biodiesel ... SF Taxi Commission requiring 50% reduction in GHG emissions by 2011...
- newrules.org iclei.org
greenvc.org natcapsolutions.org

Green Alternatives at Global Exchange

- We're working with SF School District to create an environmental service learning program for 10 pilot high schools . . .
- Working with City College of SF to expand green programs (green apprenticeships).
- Green Academy will train 200-300 low-income residents in green career skills . . .
- Creating Green Career Pathways . . .



Create Electronic and Physical **Hubs**

Fostering “UNITY OF DIVERSITY”

- Green Festivals (largest U.S. green event)
- A list of 41 Green Career websites can be found at www.globalcitizencenter.org
- GreenMart in Second Life . . .
 - video at www.globalcitizencenter.org



Final Thoughts

- To save the Eco-System, we must transcend the Ego-System . . .
- Two kinds of analysis . . .
- The Titanic (money cycle dominating the life cycle) is sinking . . .
. Let's create the next boat.

PRIME DIRECTIVE

“How do we love all the children of all species for all time.”

William McDonough



Thank You

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