Anticipating the Future:
Technologies, Cultures... and Cheeseburgers

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Behavior, Energy and Climate Change
November 8, 2007
When looking at the Big Picture...

...the Little Things Matter.

Oh, Behave
Farming...
Shipping...
Processing...
Distribution...
...and “enteric fermentation.”
4-6 kilograms of CO2 equivalent per burger. And we eat, every year...
x300 million
150,000,000 Metric Tons of CO2e

...or roughly the amount of CO2 emitted annually by all of the SUVs on the road in the U.S.!

(this one’s real)
The Risk

Heavy Weather
Pandemic Disease

War
...and if Greenland goes...

- more than 40% of the world’s population lives within 100 miles of the coast
- more than 50% of the US population lives within 100 miles of the coast
Top-Down Remediation

Geoengineering...not without serious potential drawbacks...

Particles pumped into the stratosphere, like an artificial volcano...

Orbiting Solar Shields

...at just a few trillion dollars...
Iron “Fertilization” of the Ocean to trigger Plankton Blooms
...and possibly sterilizing large parts of the sea...

Carbon Trials?
Eco-Mercenaries?

Ultra-Efficiency
Switzerland’s “2000 Watt Society” Agenda

LED Lighting

Kelvin temperature: 7000K
Cool White

Kelvin temperature: 4000K
Warm White
Hybrid Cars

Ultra-Efficient Buildings

BedZED—Beddington Zero-Energy Development
2008 Aptera

230 mpg diesel-electric hybrid.
$29,000.
Seriously.

Kaya Identity Calculations

1% Average Annual Efficiency Improvement
Stabilization at 450 ppm requires 17 TW carbon-free power (40-50 TW total demand)

2% Average Annual Efficiency Improvement
Stabilization at 450 ppm requires 4 TW carbon-free power (18 TW total demand)

3% Average Annual Efficiency Improvement
Stabilization at 450 ppm by default. Slow remediation possible with 4.6 TW carbon-free power (7 TW total demand)
Participatory Prevention

Grassroots Economics
Engaged Networking
Technologies of Cooperation
Talent Commons
Distributed Work
Community Filtering

Collaboration Systems
Blog
Micropayments
Social Networks
End-to-End

Open Source
Open Access
Mash-Up
Engaged Networking

Microfinance
Smart Mobs
Geotagging

Free/Libre Software
Creative Commons
Peer-to-Peer
Heterarchies
Participatory Earthwatch
Micro-Models

Solar Electric Light Fund

The Navajo Nation, United States of America

Kabaleo Chapter House

Micro-Models

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Open-Source Models

California Wildfire Appeal

Open-Source Bio

Tropical Disease Initiative

Barefoot College Solar Engineers, India
Transformation

Solar-Stirling Power
Zero-Footprint...

...and Biomimetic Design

Nanomanufacturing
In 2007, the Cassini Probe took this picture of Saturn eclipsing the Sun. It's a view that would be ... is far more fragile than we might wish, but there's nothing else like it that we've yet found. We abuse it at our peril.

That's us.

Everything we have done, every life lived, everything we are, is little more than a tiny dot. Our world is far more fragile than we might wish, but there's nothing else like it that we've yet found.

We abuse it at our peril.
Jamais Cascio

Open the Future
http://www.openthefuture.com