ROCKY MOUNTAIN INSTITUTE

Synchronizing business, community & environment

Rocky Mountain Institute

- Entrepreneurial non-profit
- International
- Research, consulting, & education

Mission: Foster the efficient & restorative use of resources

to create a world that's more

- Secure
- Prosperous
- Life-sustaining

Winning the Oil Endgame

(www.rmi.org)

Energy Efficiency

The rapid-deployment energy resource

- Creates local jobs
- Saves millions of dollars

Example: Sacramento California

- Invested $59 million to save electricit
- Enabling customers to save nearly as mu
- Created 880 jobs
- Increased regional income by $124 milli

Energy Efficiency

- Osage Iowa

- Efficiency programs save $1 million/year
- Home owners save almost $200/year
- local businesses save much more
- Unemployment: 1/2 US average

www.sustainable.doe.gov/success/osage_muni.shtml

Green Energy ain't for sissies

"Efficiency Vermont:"
-> Buildings, lighting, equipment & appliances

Cost* —	$89 million	(2000-2004)
Benefits —	172 million	(Cumulative lifetime economic value)
Net —	$83 million	

Bonus: 1/2 million tons < greenhouse gas emissions
Increased reliability

www.efficiencyvermont.com

* 37% of new-supply cost

Green Energy ain't for sissies

Midwest study (4 states)
Invest $104 B in efficiency for 12 years:

- Saves $183 B on energy bills
- Creates 205,000 net jobs
  [= to # jobs from 1,367 small manufacturing plants]

Source: Laitner, S., J. DeCicco, et al. (1995)

Green Energy ain't for sissies

U.S. Study:
Invest $35 B to shift to 20% clean electricity by 2020:

- Reduces CO_2 27%
  NO_x 17%
  SO_x 19%

- Saves $22 to 32 B on energy bills
- Increases wages $6.8 B
- Creates 155,000 net jobs each year

Source: Nayak, N. (2005)

Green Energy ain't for sissies

"The employment multiplier effect for efficiency exceeds any other type of energy production."
Tony Usibelli, Energy Policy Director
Office of Trade & Economic Development
State of Washington

Source: Solar Development Inc

Green Energy ain't for sissies

Solar industries directly employ nearly 20,000 people and support over 150,000 jobs in

- glass & steel manufacturing
- electrical & plumbing contracting
- architecture & system design
- battery & electrical equipment

Source: Solor Development Inc

Community Energy Opportunity Finder

Interactive web tool

http://finder.rmi.org

Quantifies increased jobs & savings,
& reduced pollution
Puts energy efficiency & renewables
on the E.D. radar
= to consultant's

Economic Development

New Business

Leakag

“Growth,” development & expansion

The word ”Growth" is commonly used to describe two very different concepts:

Expansion and Development

Development ⌦ Expansion

Expansion makes a community bigger

(e.g. more people, infrastructure, buildings, subdivisions, malls, *etc.*).

Development makes it better

(e.g. living-wage jobs, increased income, more savings, and improved quality of life.)

Development ⌦ Expansion

- Expansion can be beneficial
- Much expansion is not
- Many opportunities exist to *develop* without necessarily *expanding*.

— Throughput

Examples:

- Barrels of oil
- Bushels of grain
- Board feet of lumber
- Tons of ore
- Sales-tax revenues
- Real-estate transfers
- Tourist days
- *Gross Domestic Product*

— Throughput

Definition*:*

- The rate at which a local economy flows.

Including: The sum of the materials that are harvested (or extracted), processed, used, and discarded as waste.

— Throughput

Conventional wisdom:

Prosperity requires continually increasing throughput

(without considering costs)

Throughput

- Throughput is *Gross*
- The community needs *Net*

But conventional economic development proceeds like a business that bases all decisions on gross sales.

Smart *Development*

Five strategies

1. Restrict expansion
2. Make expansion pay its way
3. Design expansion right
4. Build affordable housing
5. Foster compatible development

Development w/o Expansion

Optimizing multiplier-effect

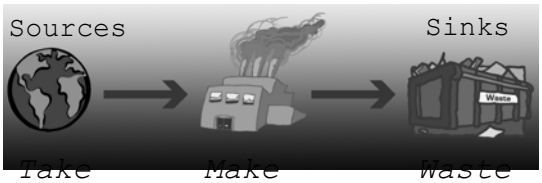
Examples:

1. Energy efficiency
2. Restoration & Renovation
3. Building salvage
4. Vendor matching
5. Waste matching (industrial symbiosis)
6. Local business ownership
7. Import substitution
8. Community-supported agriculture
9. Business mentoring
10. Local currency
11. Micro-credit
12. Community development corporations
13. Remanufacturing
14. Advanced business retention & expansion
15. Flexible business networks
16. Community cash-flow capture
17. Water efficiency
18. Affordable housing

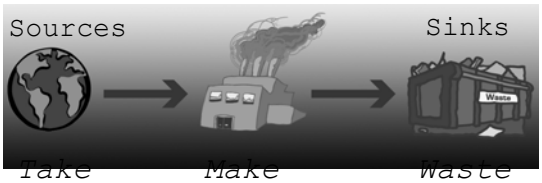
“Grappling with Growth”

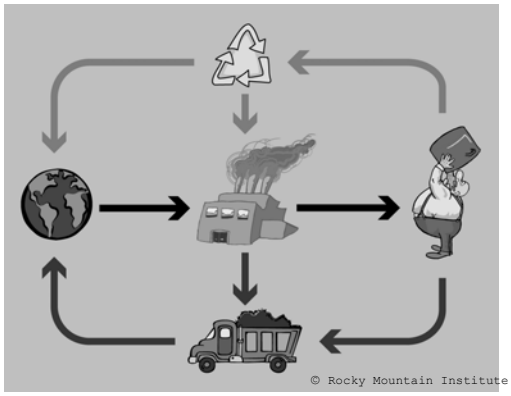
(www.rmi.org)

onventional Economics — Linear Perspective



Linear Perspective





Sprawl Drivers

1. Highway subsidies
2. Gasoline subsidies (~$3 billion/yr)
3. Sewer subsidies
4. Urban renewal (1950s)
5. GI Bill (post WWII)
6. FHA subsidies & redlining
7. Home-mortgage tax exemption

Sprawl Drivers

8. Railroad disinvestment & destruction
9. Local subsidies to government-service extensions
8. Parking subsidies
9. Electric utility policy

- *Making a Place for Community*, Williamson, et.al.
- Taxpayers for Common Sense
- *New American City*, Sweet, et. al.