


Infrastructure & Clean Energy



Going Viral



**When there's a huge solar energy spill,
it's just called a "nice day"**



PROMISE
energy

Here Comes Everybody!



Recognize This Little Guy?



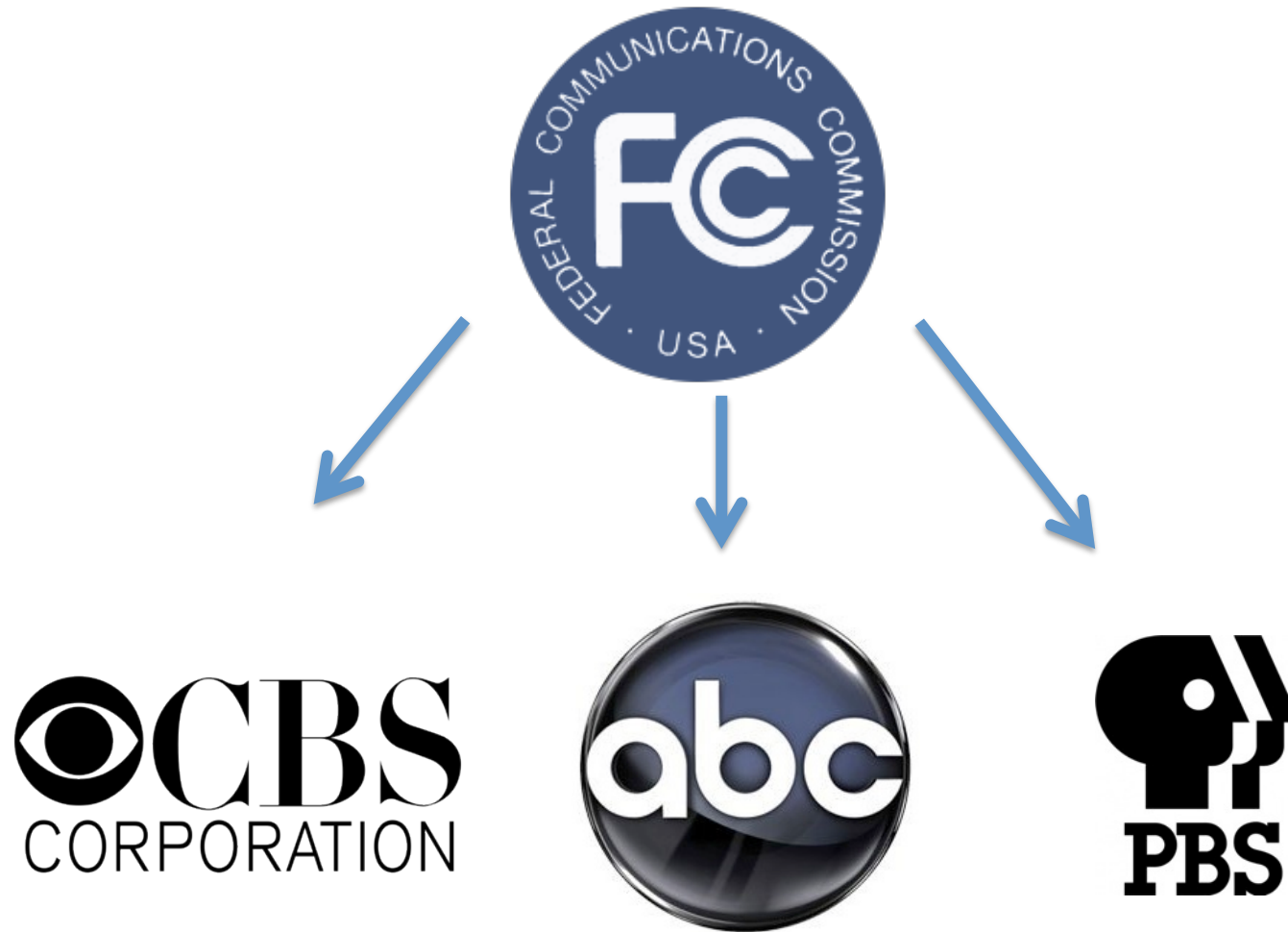


waze

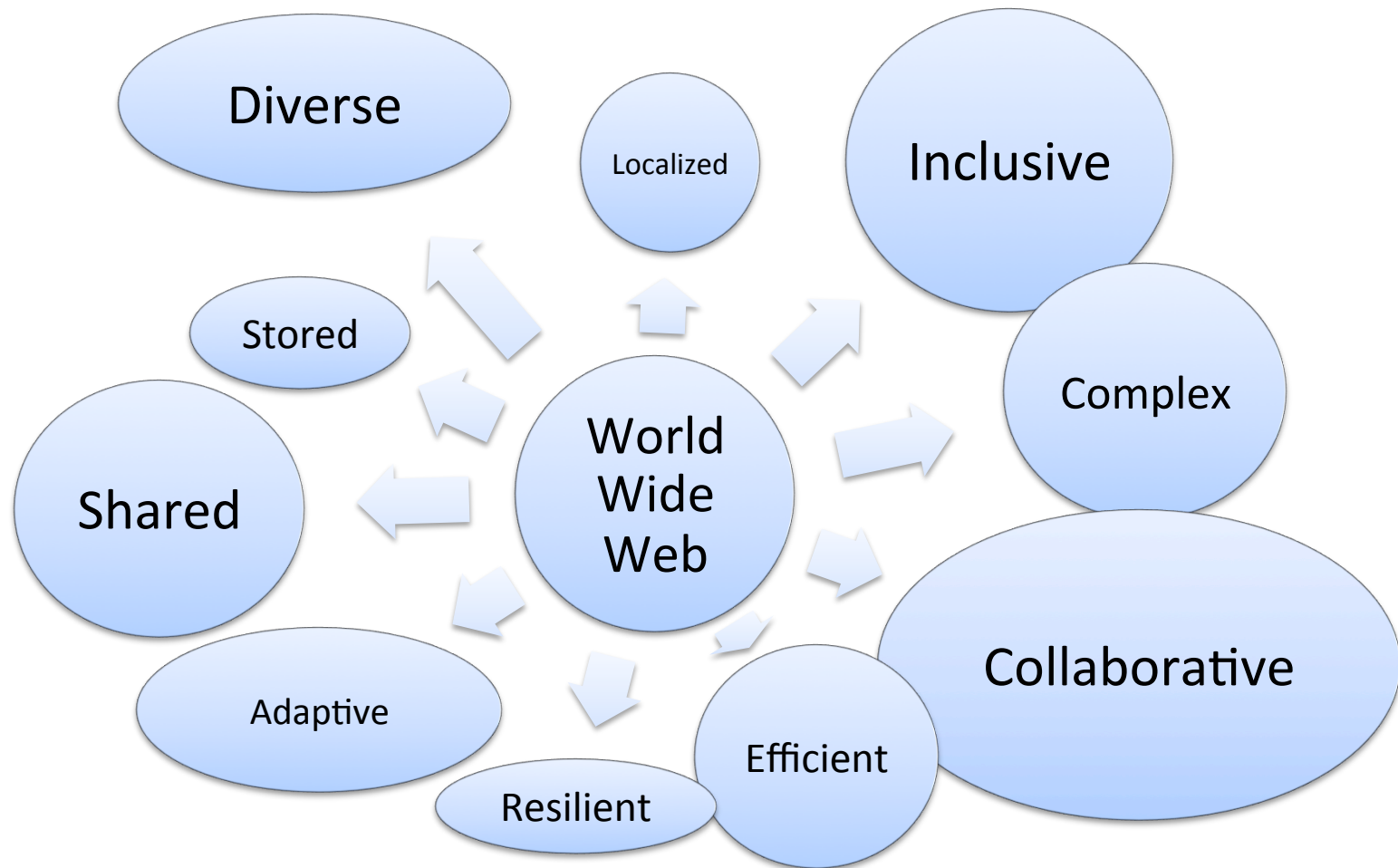


\$1,000,000,000

Top Down Hierarchy

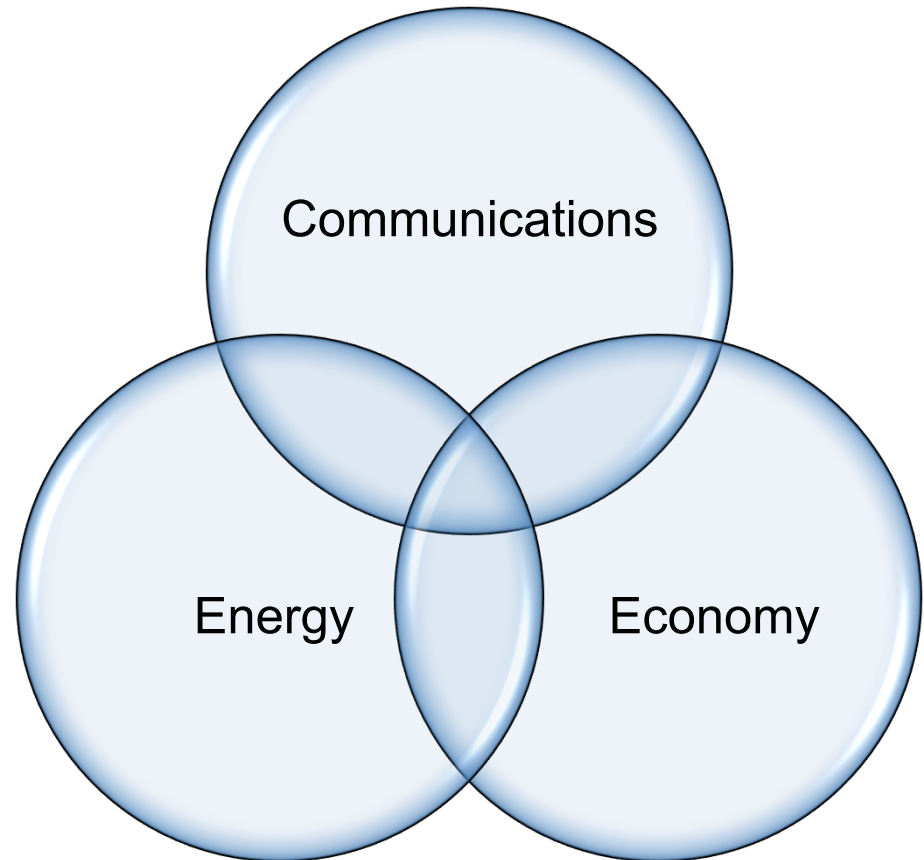
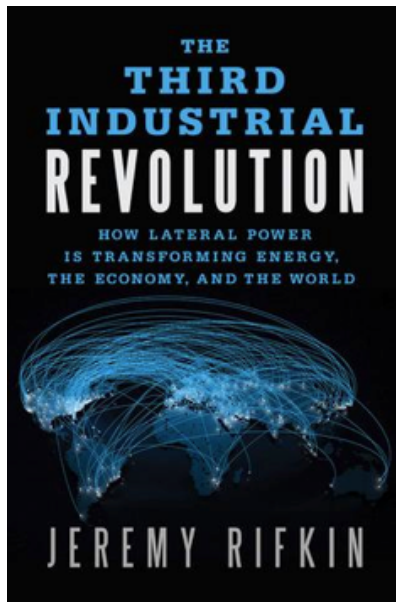


The Power of Networks



Paradigm Shifts in Energy & Economy

“Great **economic** revolutions occur when new **communications** technologies converge with new **energy** systems.”
- Jeremy Rifkin



MIND
— YOUR —
PS & QS

Personal Question

Which economic strategy is better in the long run?

Personal Question

Which economic strategy is better in the long run?

**a) Burn Up
Inheritance**



Personal Question

Which economic strategy is better in the long run?

**a) Burn Up
Inheritance**



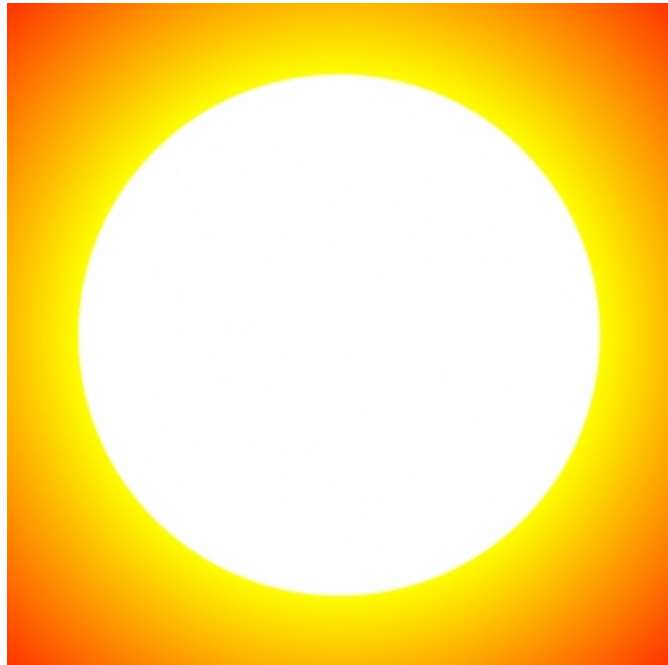
**b) Build Up
Income**



Pop Quiz:

What % of the World Economy is
Powered by Solar Energy?

- a) Under 1%
- b) 5% - 20%
- c) 20% - 80%
- d) Over 90%



And the Answer is....

Pop Quiz:

What % of the World Economy is
Powered by Solar Energy?

- a) Under 1%
- b) 5% - 20%
- c) 20% - 80%
- d) **Over 90%**



94%

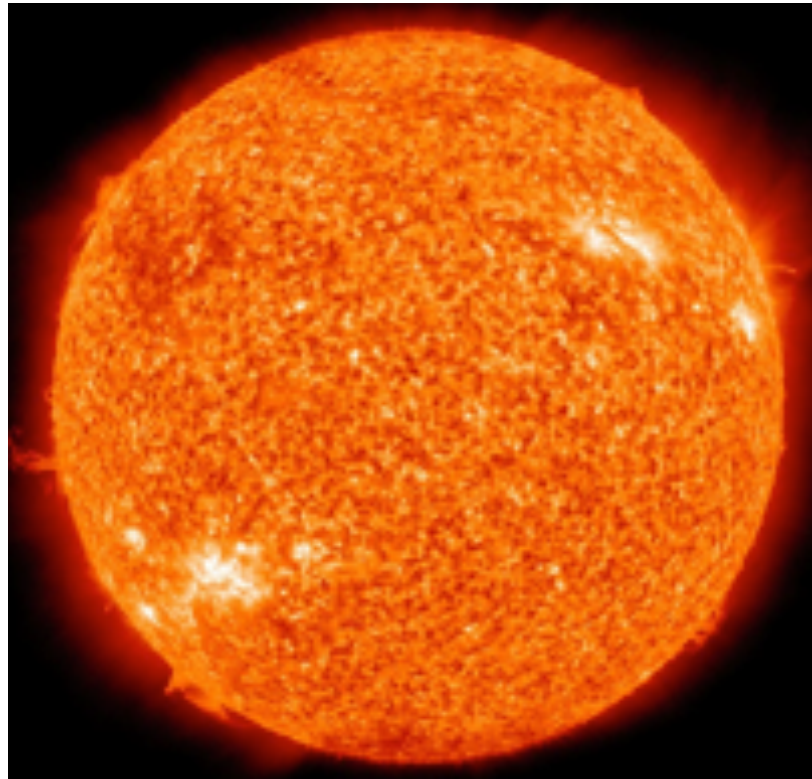
“My God! The Sun.”



“What Is It, Simon?”



“A Large Fiery Ball at the Center of our Solar System...”



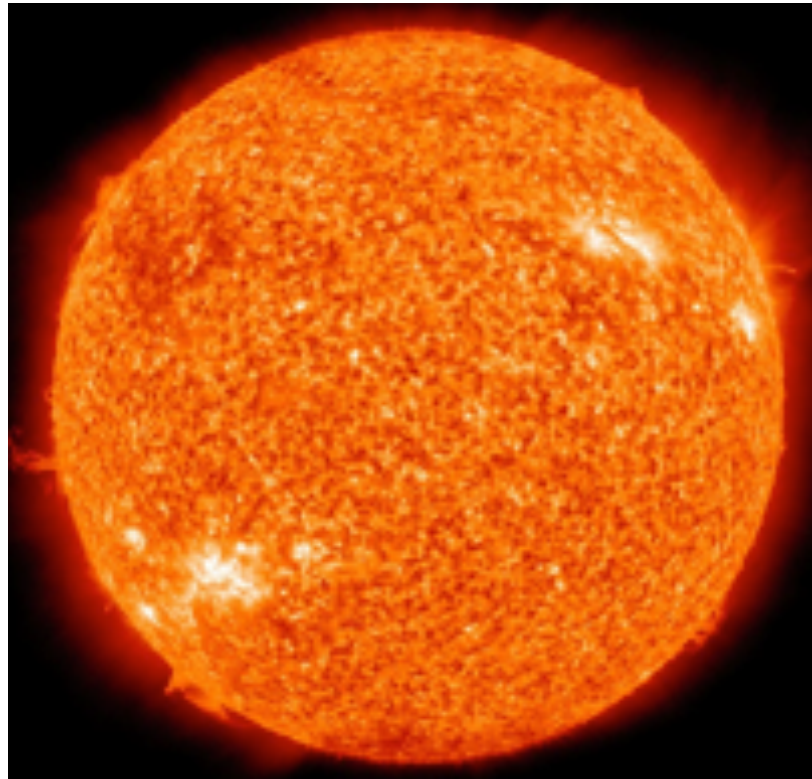
PROMISE
energy

Surprise!

Not all Solar Energy is Renewable



The Fundamental Economics of Energy Boil Down to a Simple Choice



Are We Primarily Burning Inheritance or Building Income?



From an Economic Perspective There are 2 Kinds of Solar Energy

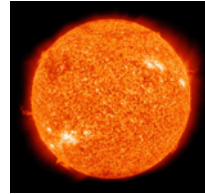
Fossil Fuel Energy is
our **Solar Inheritance**

Renewable Energy is
our **Solar Income**



Solar Inheritance

300 Million
Years of Sunshine



Fossil Fuels



Coal

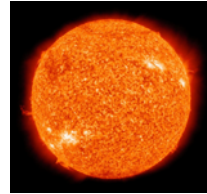


Oil



Natural Gas

Solar Income



6500 Terawatts of
Nuclear Fusion
Delivered 24/7 in 8 mins
To every place on Earth
For FREE!



Sources of Global Energy:

Solar Energy: **94%**

Inheritance: **81%**

Oil: 33%

Nat Gas: 21%

Coal: 27%

Income: **13%**

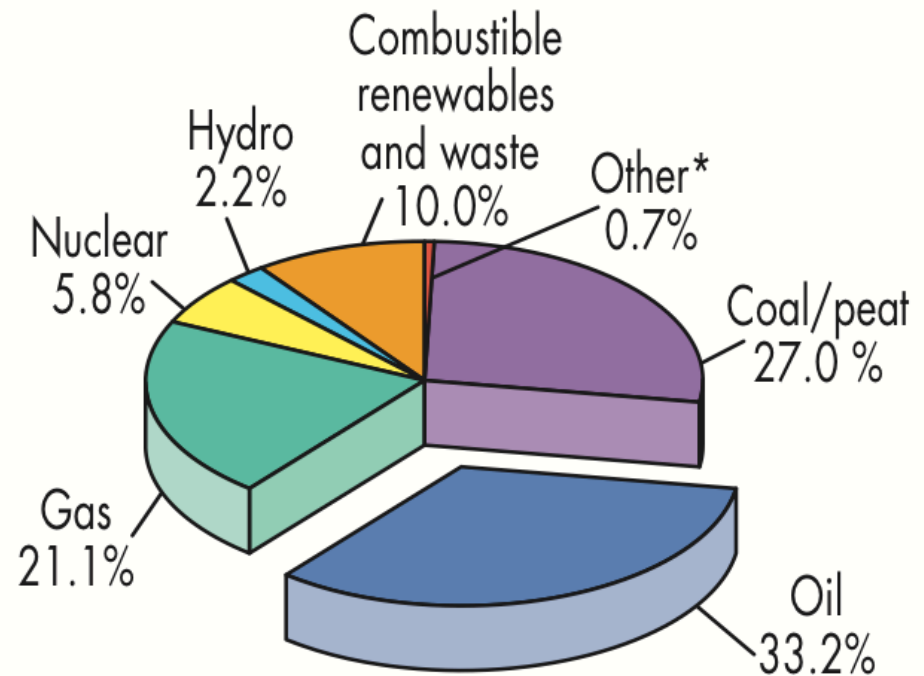
Biomass & Trash: 10%

Hydropower: 2%

Renewables: 1%

Atomic Energy: 6%

Lunar Energy: 0%

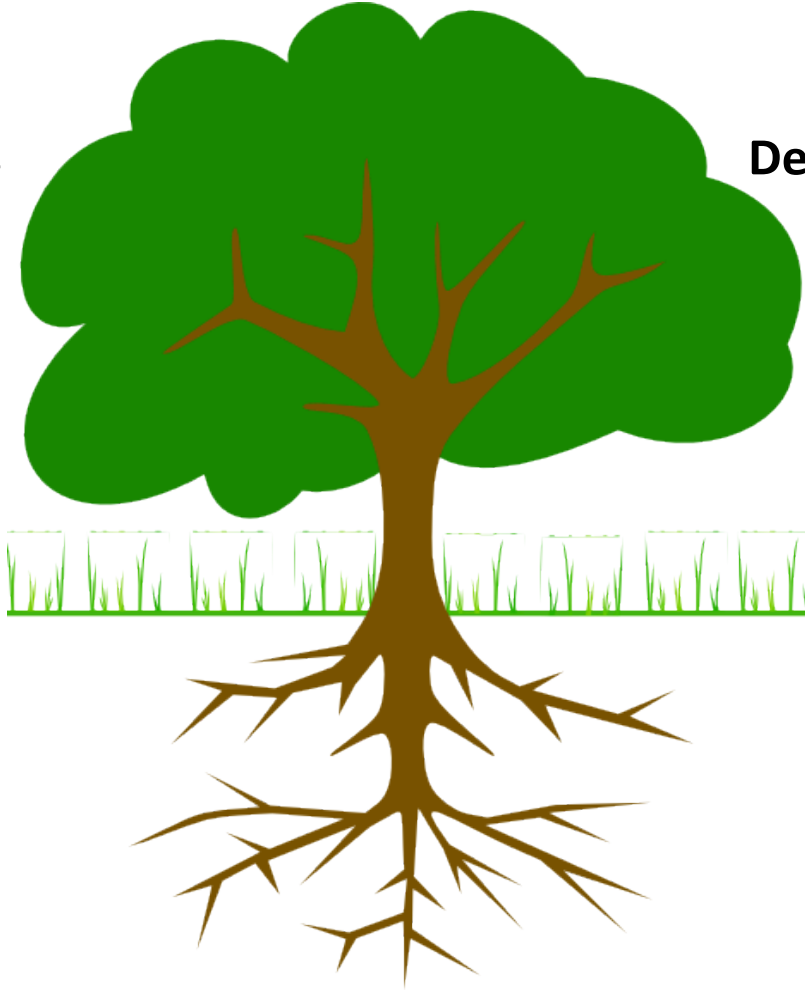


**Other includes geothermal, solar, wind, heat, etc.*

Takers or Makers?

Digging Fossil Fuels

Difficult
Dangerous
Expensive



Developing Clean Fuels

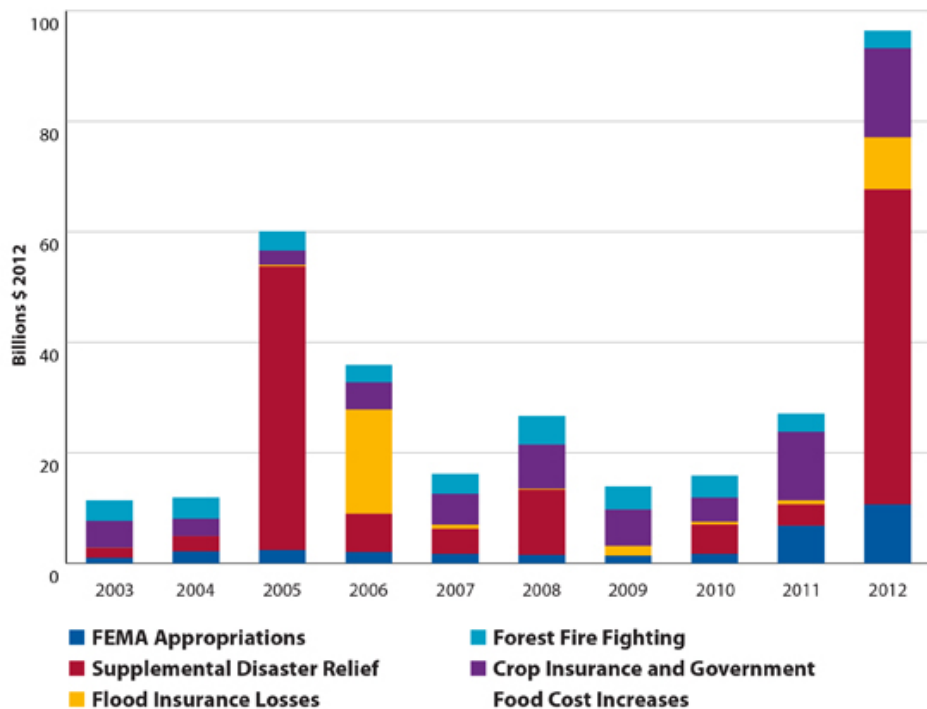
Easier
Safer
Cheaper



PROMISE
energy

When Do Costs Outweigh Benefits?

Climate Change Costs of U.S. Federal Government



← **\$96 Billion
in 2012**

**\$1,100 per
person**



PROMISE
energy

Helping or Hurting?

DAVID C. KORTEN

Author of the bestselling
WHEN CORPORATIONS RULE THE WORLD

The Post- Corporate World

**LIFE
AFTER
CAPITALISM**

"A roadmap to a more
humane future in which
everyone matters."
—Gloria Steinem

U.S. Corporate Profits:

\$500 Billion per year

Negative Impacts of Industry:

\$2.5 Trillion per year



PROMISE
energy

Is There a Better Way?



Payback of 1000 to 1!

Renewables are on the Rise

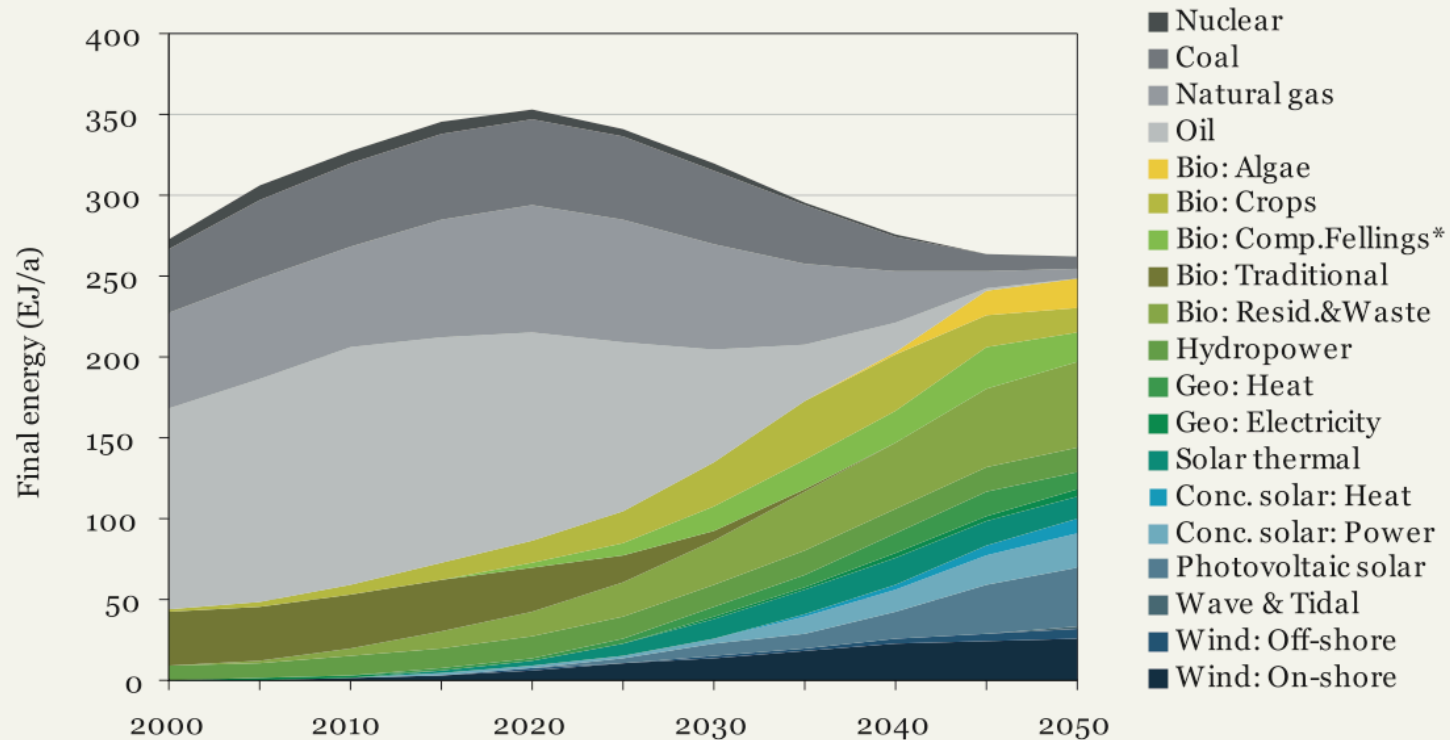


Figure 4: World Energy Supply by Source.
The Ecofys Energy Scenario, December 2010

Clean Energy Costs are Falling

2015:
**Solar will Be
Cost
Competitive for
2/3 of US
Population**

Solar Panel Costs Drop, Fueling Rise In Renewable Energy

06/12/13 01:25 PM ET EDT **AP**



722 people like this. [Sign Up](#) to see what your friends like.



190

199

7

2

121



GET GREEN ALERTS:

[SIGN UP](#)

FOLLOW: [Green Energy](#), [Solar Panels](#), [Global Solar Power](#), [Renewable Energy Costs](#), [Solar Energy Costs](#), [Solar Panel Costs](#), [Solar Panel Investments](#), [Solar Power Costs](#), [Solar Power Investments](#), [Green News](#)



Wayne Goode with Inman Solar installs solar panels on the roof of Buckman Hall at the St. Agnes

BERLIN -- A dramatic drop in the price of solar power technology last year helped the continued growth of renewable energy, according to a U.N.-backed report published Wednesday.

Global energy-generating capacity from renewable sources rose by 115 gigawatts in 2012, compared with 105 gigawatts the previous year, the report by the Paris-based think tank REN21 showed.



PROMISE
energy

Level the Playing Field

Remove Subsidies from Fossil Fuel Companies

Invest the savings in smarter systems

- Water
- Transportation
- Agriculture
- Urban Design
- Building Performance
- Efficiency

Bring Additional Investment Tools to Renewables

- Virtual Net Metering
- Crowdfunding
- Solar REITs
- Municipal Bond Finance
- State Clean Energy Funds
- Retail Investors

What Would It Cost...

The World's Top 10% to invest
in a Sustainable Energy Future?

\$3.90 per day



So the real question is...

**How do we bring that
investment to play?**

CA Leading the Way

- AB32 – Global Warming Solutions Act
- Net Zero Buildings
- Cap and Trade
- Prop 39
- High Speed Rail Gets Green Light
- Solar Ready Roofs
- Energy Efficiency Strategic Plan

"Policy can unleash the potential of **technology** to ensure a sustainable **energy** future for our planet."

- Int'l Energy Agency Report, June 2012



Sayonara San Onofre

Renewables Provide
More Baseload Power
in US than Nuclear



More Solar Roofs

California now has
Over 150,000
Solar roofs

That's equivalent to
3 Coal-Fired
Power Plants!



PROMISE
energy

More Solar Jobs

43,000 Californians
work in Solar

More than
So-Cal Edison,
PG&E, and
SDG&E Combined!



PROMISE
energy

City of LA Requires Solar Ready Buildings



Whole State of CA !

~~City of LA~~ Requires Solar Ready Buildings



Whole State of CA !

**City of LA Requires
Solar Ready Buildings**



Making Solar Easier & Cheaper

Why? Because Better Buildings Save Money

Sustainability: From Desired to Required

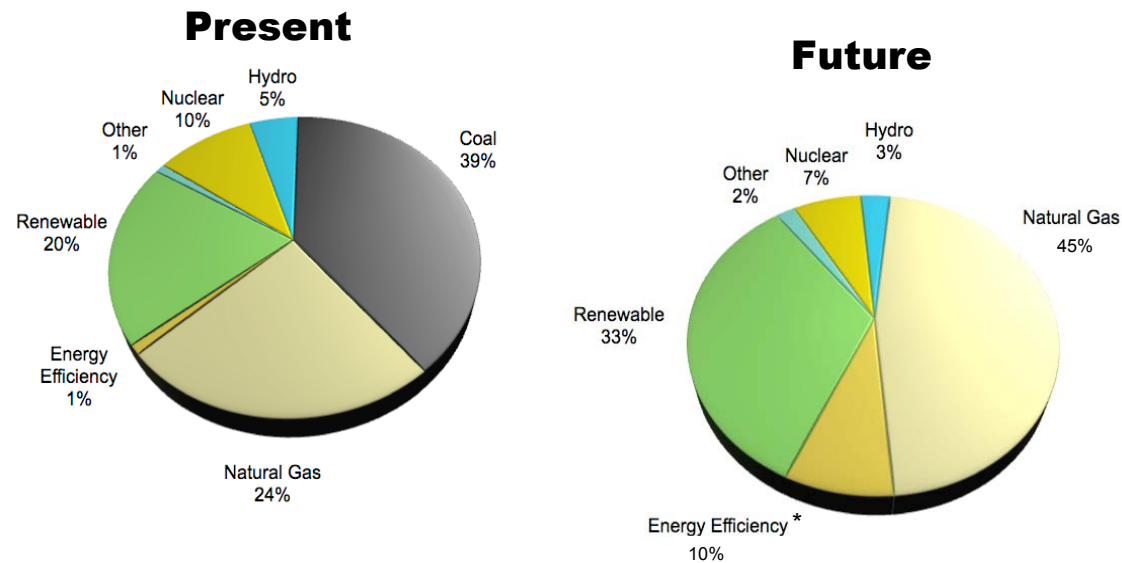
Lancaster, CA Becomes First US City to Require Solar

Every new housing
development must average 1
kilowatt per house.



What's the Plan for LA?

Power Supply Replacement Program



Our power supply was built over past 100 years. We will replace over 70% of it in the next 15 years. Consistent additional investment is needed to keep us on track.

6



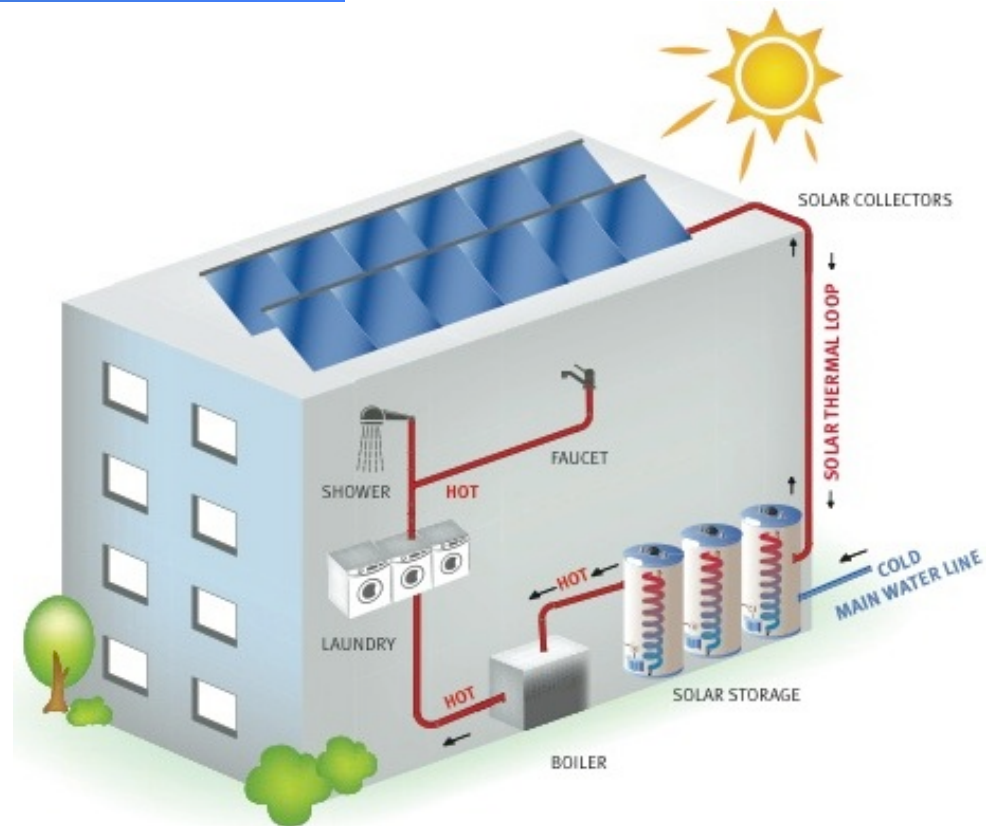
FRACKING:

Same Fossil Fuel...

Great New Flavor!

SOLAR WATER HEATING

5x
More Efficient
than Solar PV



This is Affordable Housing?



Energizing Affordable Housing

Leaders in:

- Sustainability
- Financing
- Community





PROMISE
energy

Integrated Design & Financing Solutions For Renewable Energy Projects



Finance



Design



Construction

Embracing the Challenge and the Change



Andy Mannle

Andy@PromiseEnergy.com

