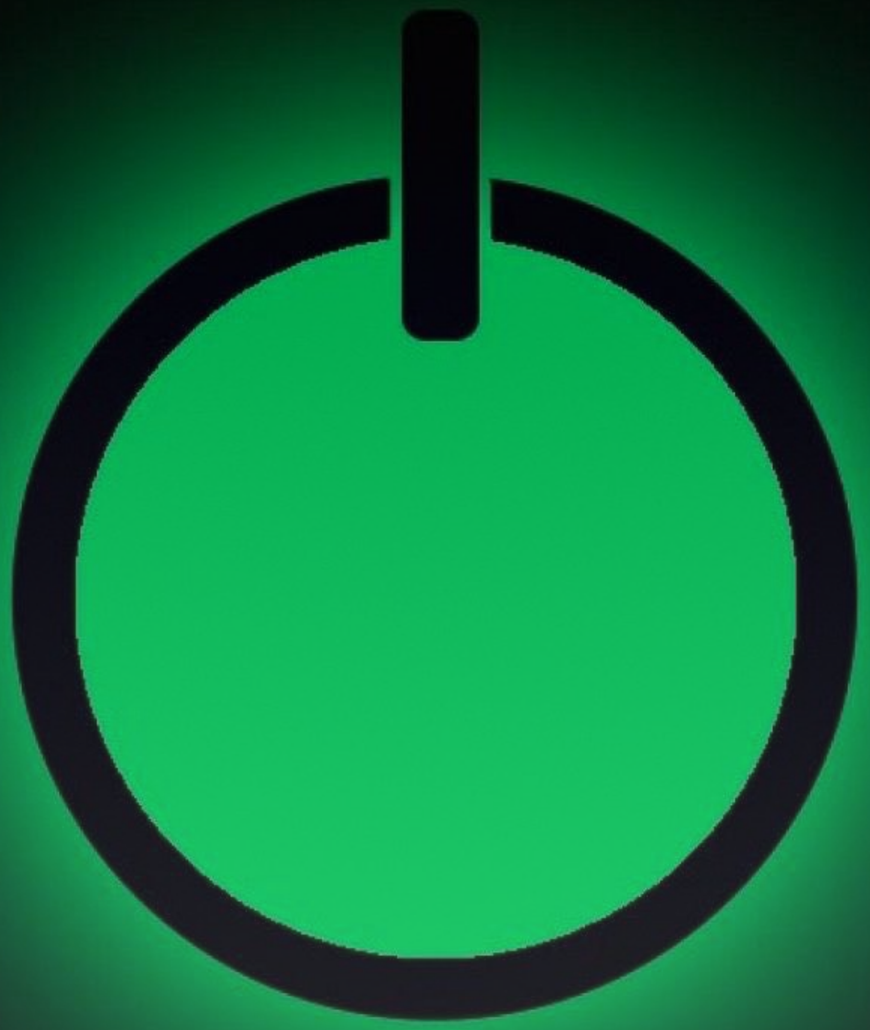
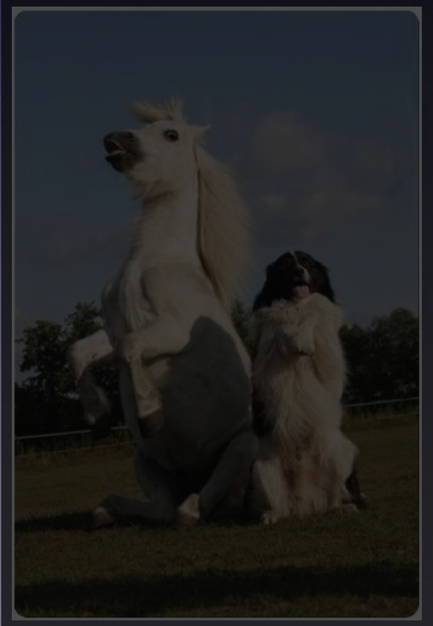
Ch 1 - Energy is Prosperity





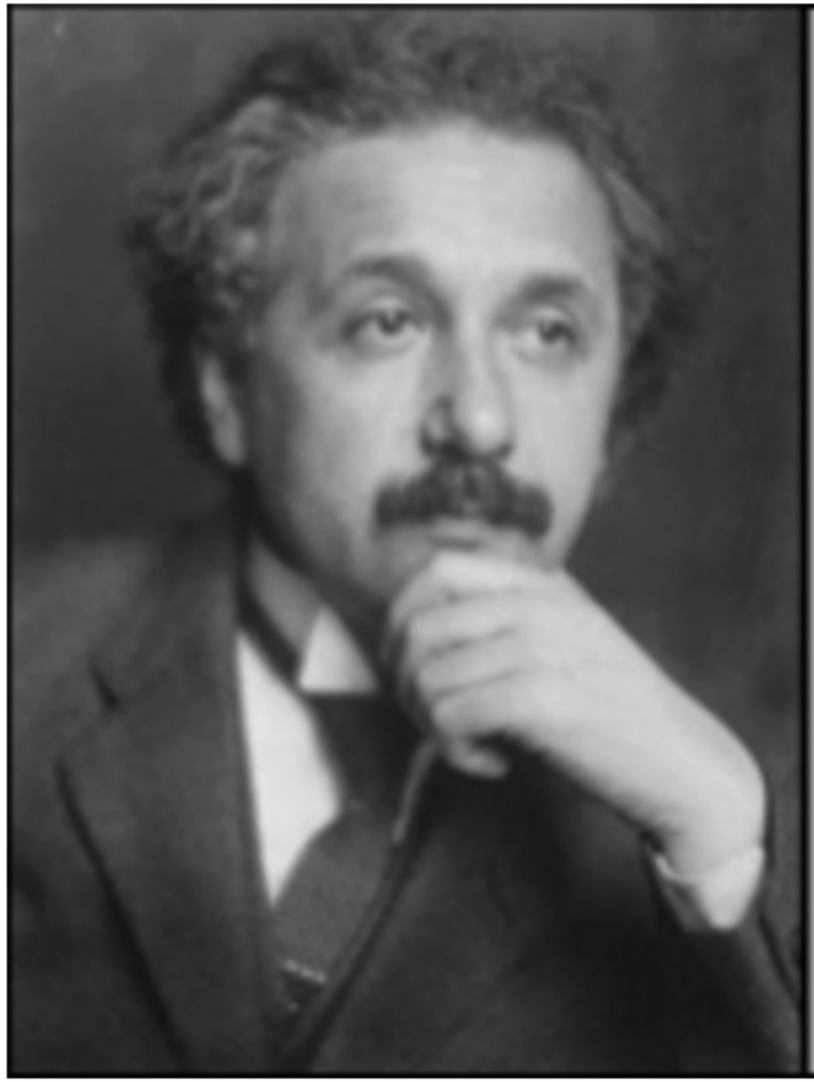
The Reality of Energy Transition

Central Generation

Corruption

Market Lockout

is Absurd



Energy is everything and that's all there is to it.

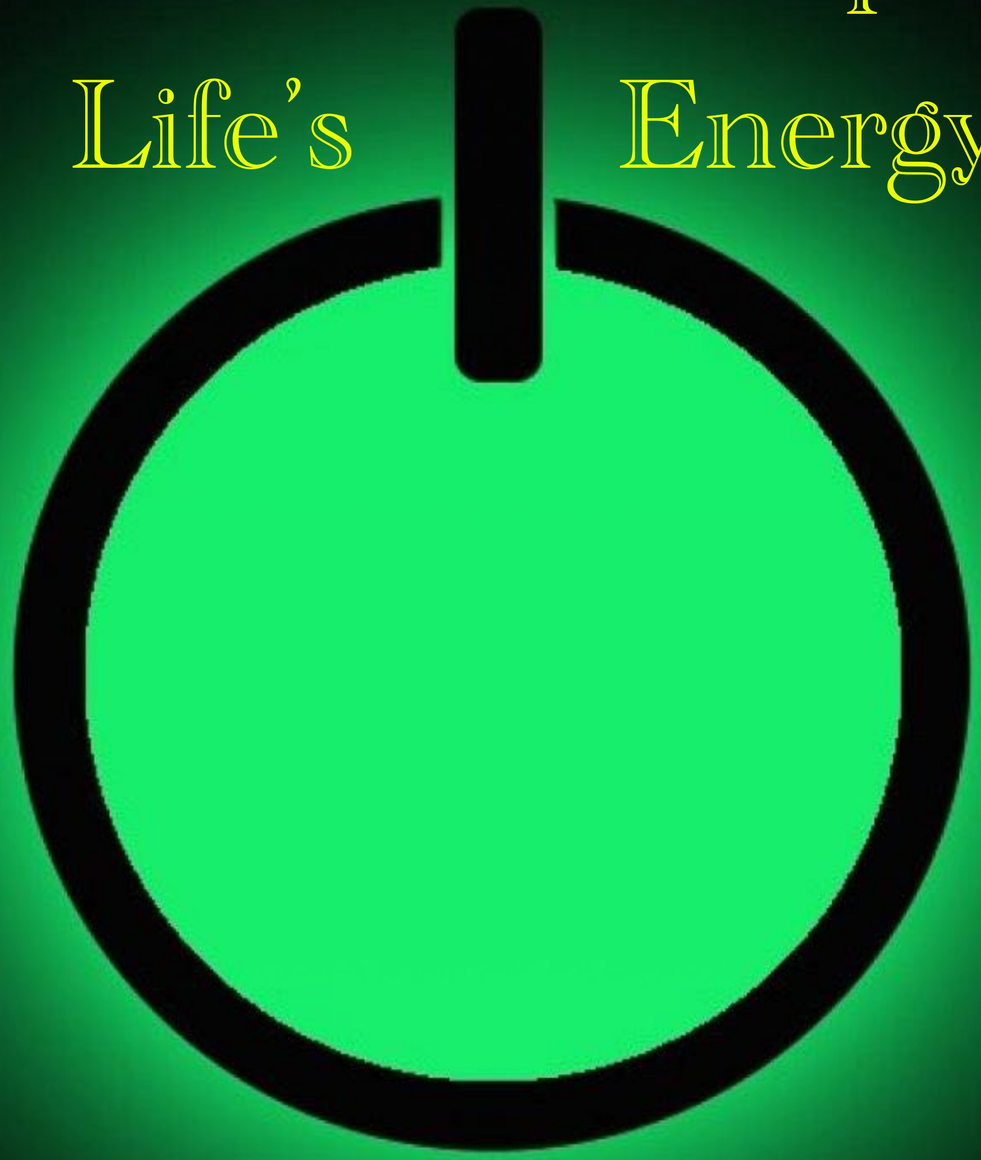
Match the frequency of the reality you want and you cannot help but get that reality.

It can be no other way.

This is not philosophy.
This is physics.

- Albert Einstein

What FLOW are you dependent on for Life's Energy?



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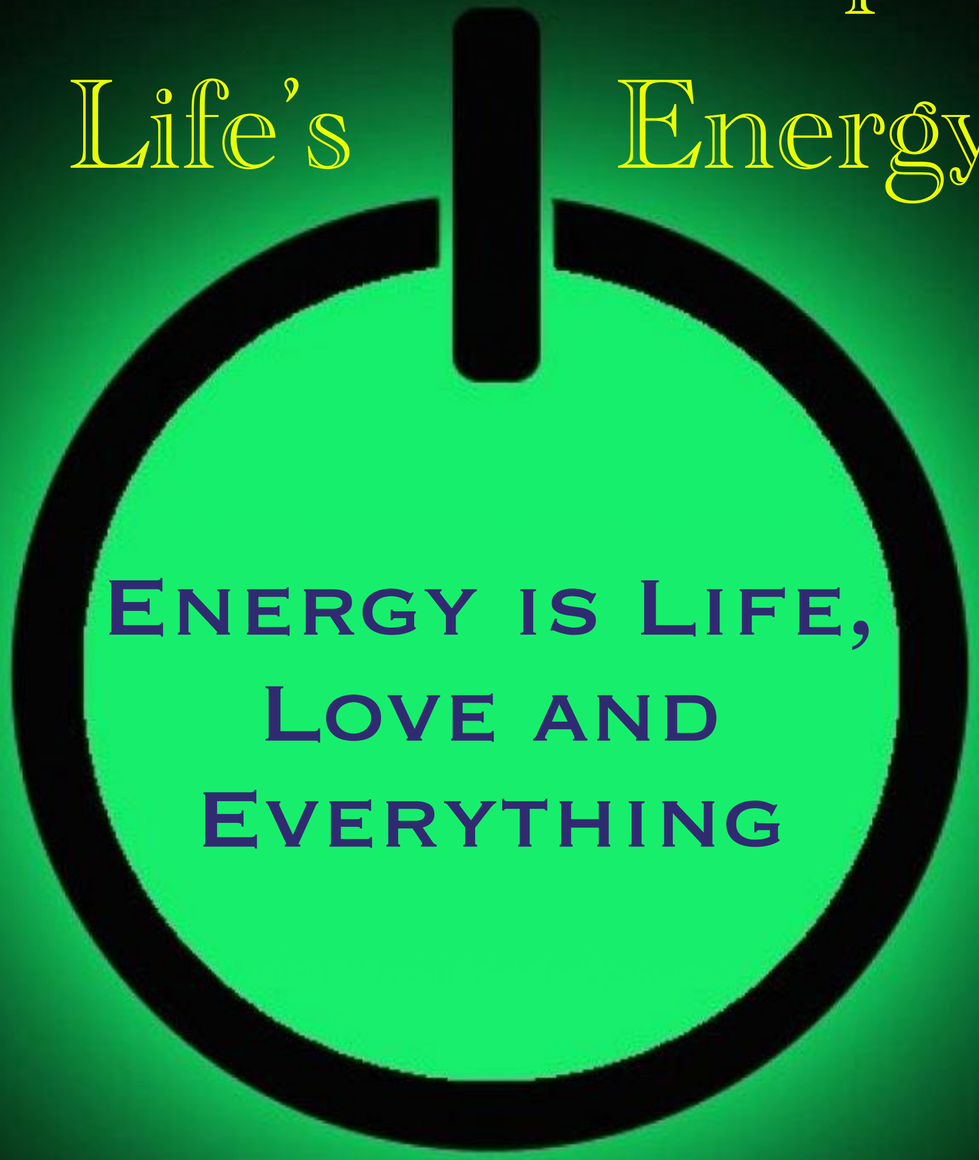

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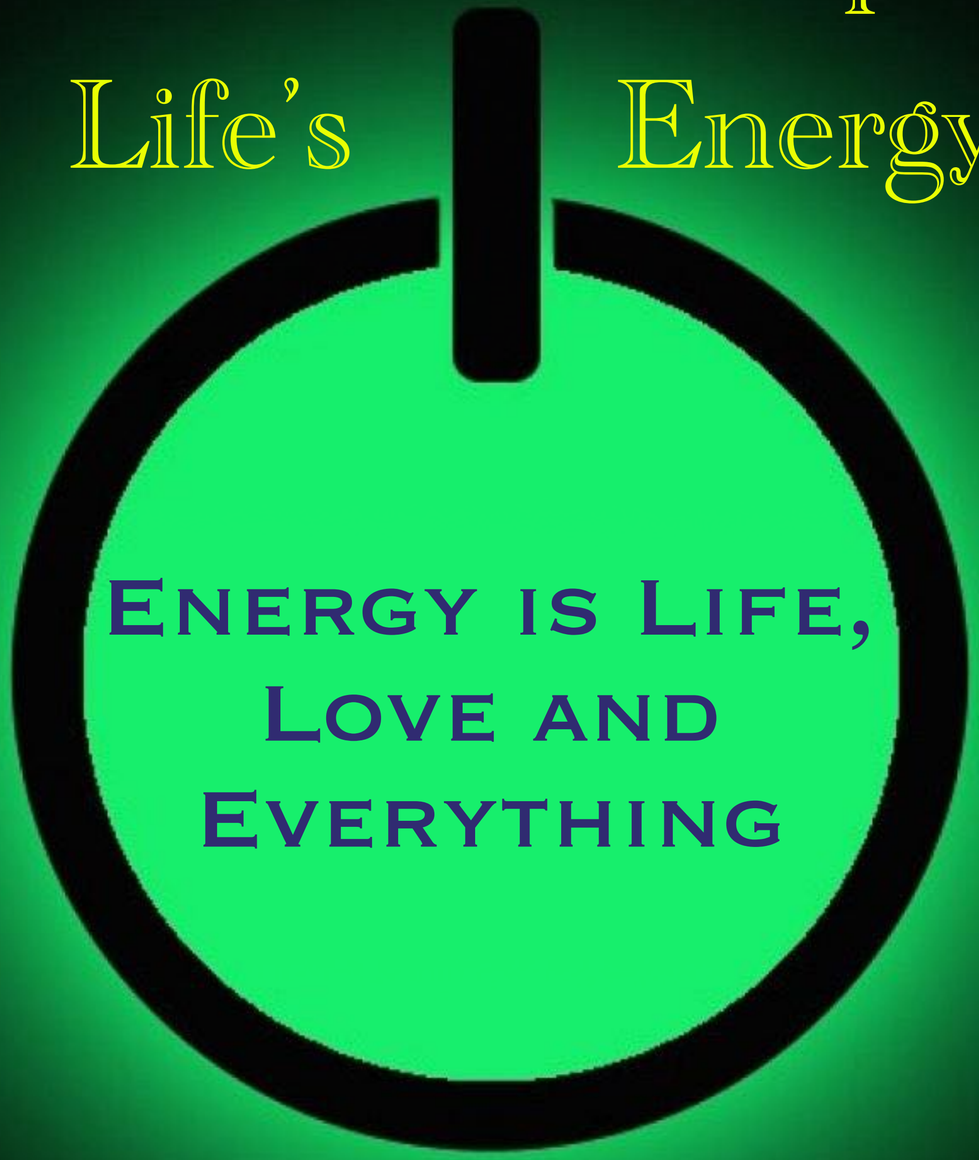


THAT'S ALL THERE IS TO IT

101

DG Distributed Generation

CG Centralized Generation

PV PhotoVoltaics

DE Distributed Energy

DER Distributed Energy Resources

IOU Investor Owned Utility (UniDirectional)

ICE Internal Combustion Engine

SunFarm ENERGY

Quiz

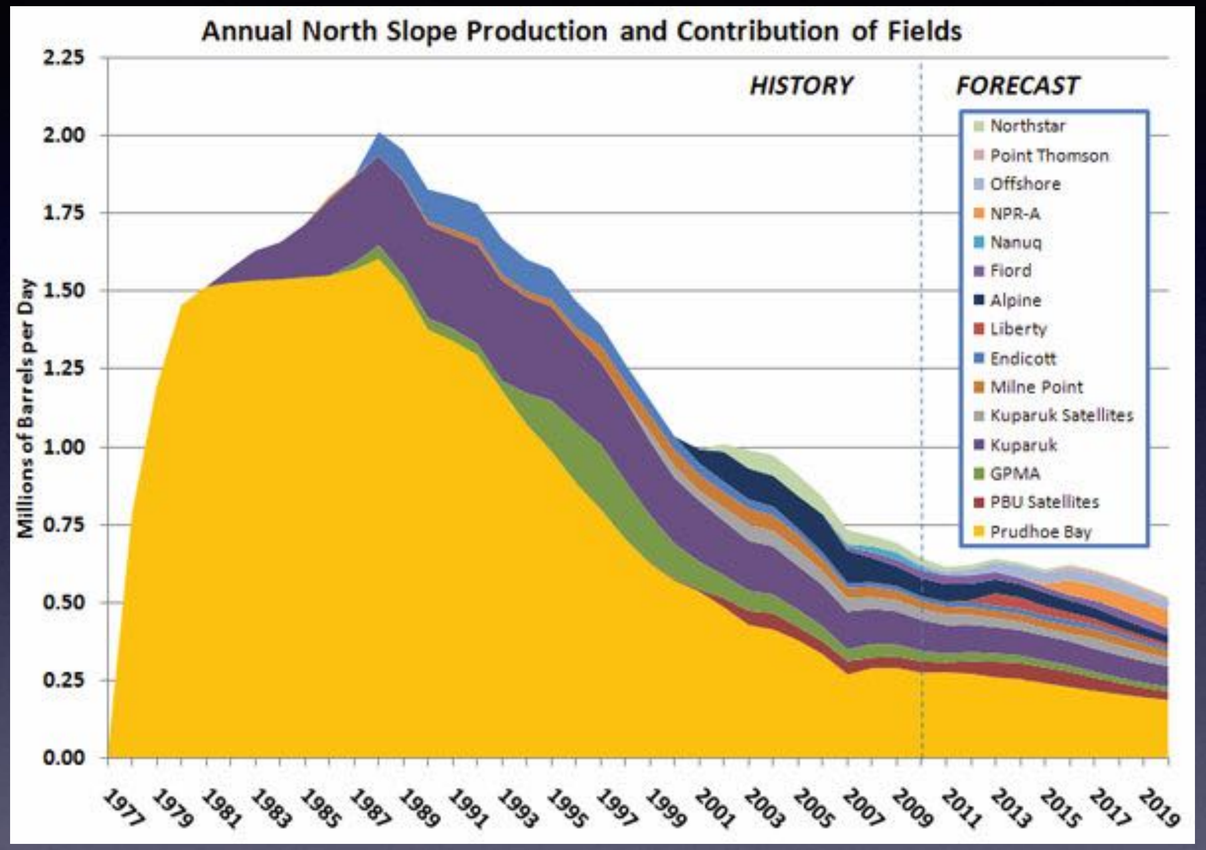
The Least Toxic of All Energy Sources IS?

Understand what you are?

SunFarm ENERGY

The Least Toxic of All Energy Sources WAS

Conventional Crude



SunFarm ENERGY

Will you be Collateral Damage in the Battle to Monopolize Energy?

Slavery or Liberty

Is a CHOICE

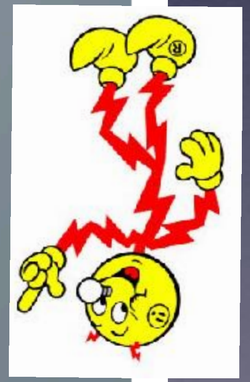


IMAGE SOURCE: GETTY IMAGES.

MONEY comes from the Bank

FOOD comes from the Fridge

ENERGY comes from the GRID

The FED PRINTS Dollars but no electrons

YOUR Life depends on

TRUST

people-in-charge
KNOW what they are doing

YOUR Prosperity Held Hostage

Expect Disturbance as

Distribution Costs Approach Generation Costs

FLORIDA

"THE SUNSHINE STATE"

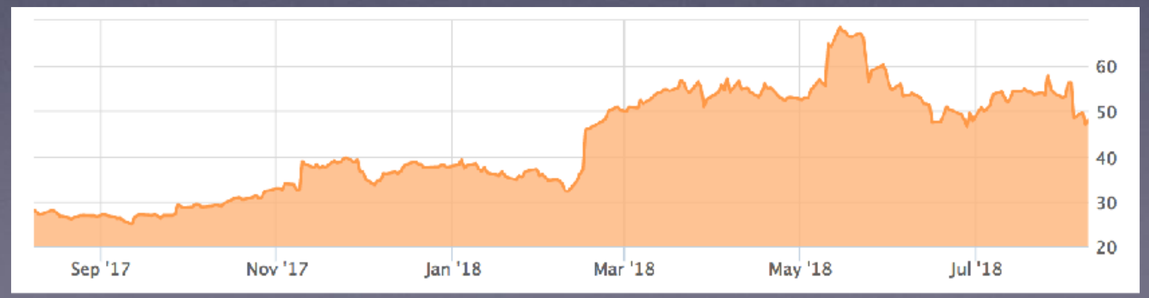
IMPORTS 99+% of it's Energy

SMART Money is on >

FLORIDA

"THE SUNSHINE STATE"

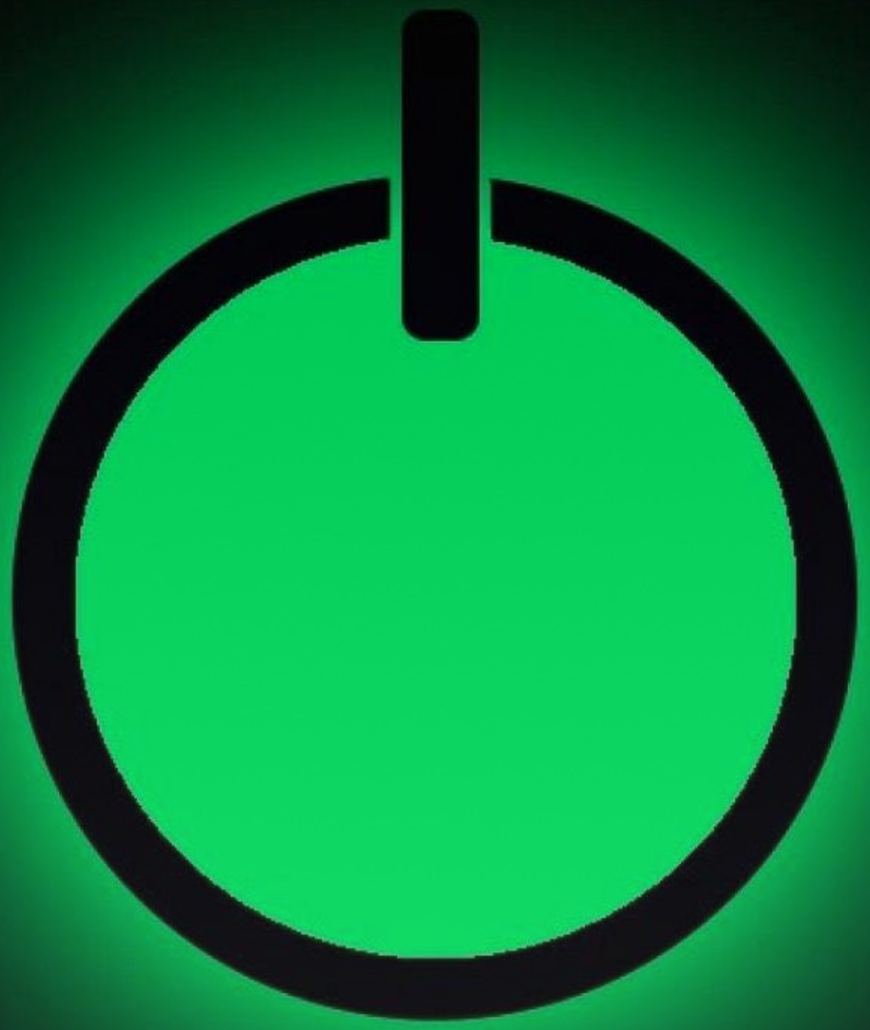
ENERGY TRANSITION

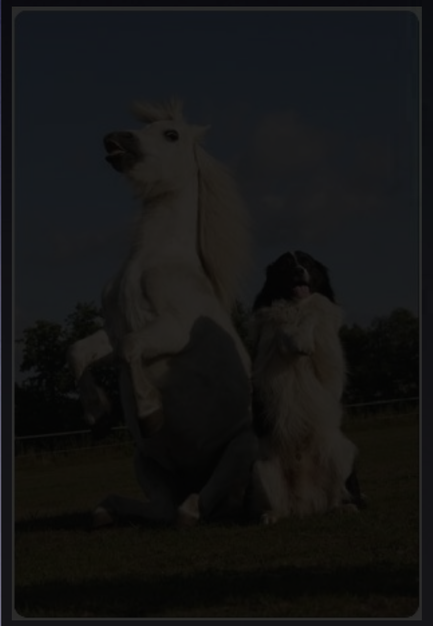


Distributed Energy Resources

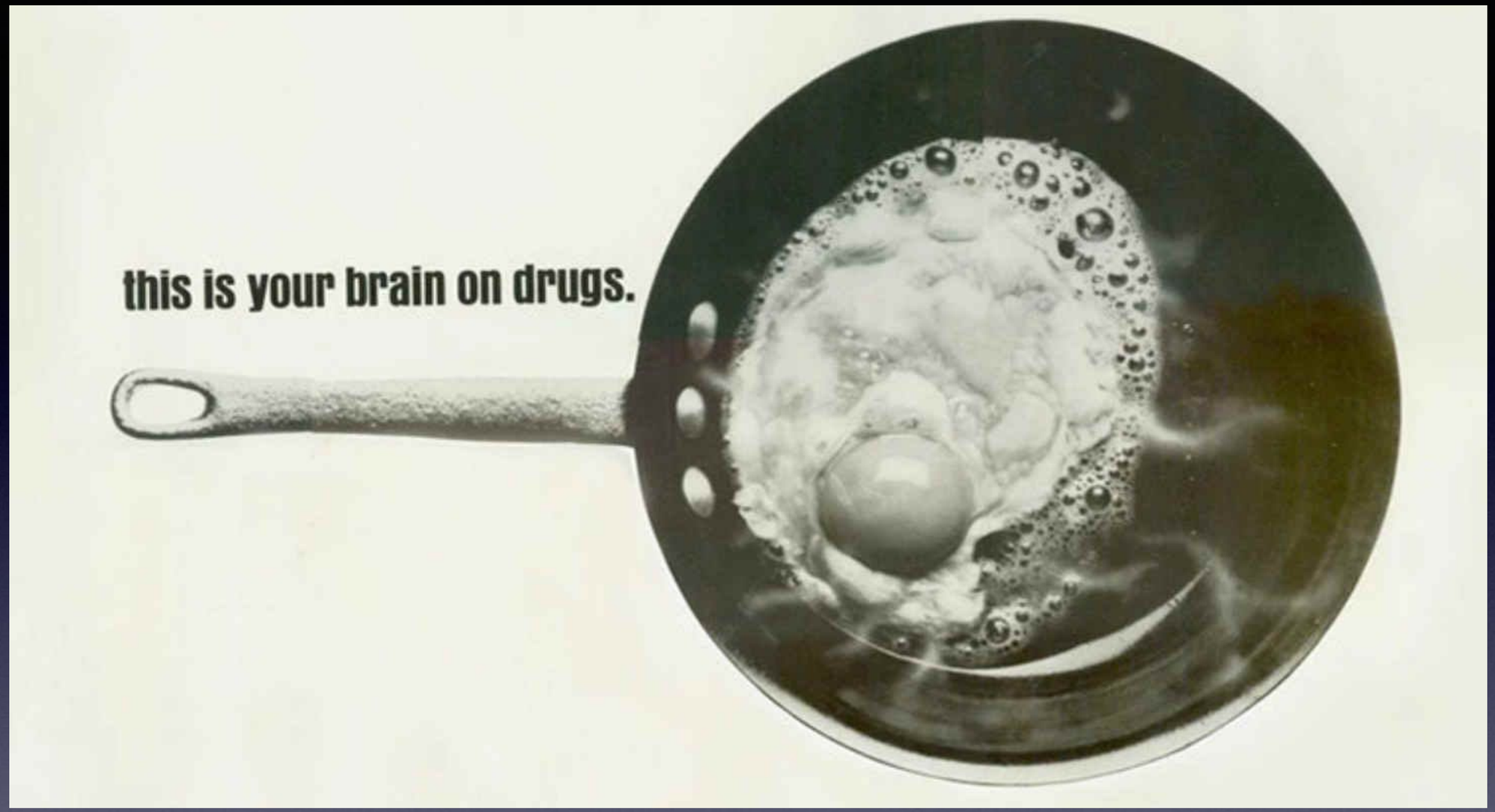
SunFarm ENERGY

Ch 2 - Decline of Centralized Energy





Entropy gets Respect



This is your Brain on Combustion of Fossil Extractions

Much of the ONE-WAY

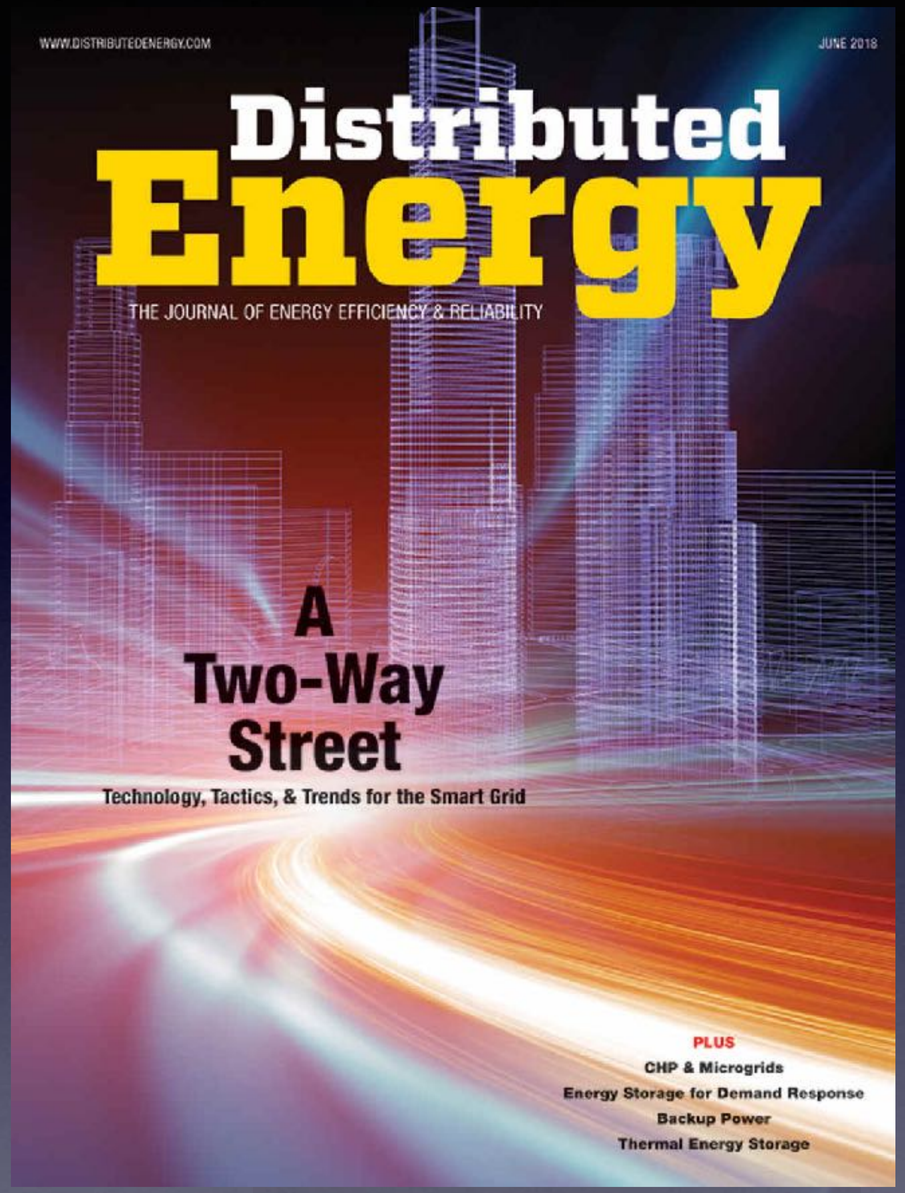
Centralized GRID

with it's debt +

Interdependencies is

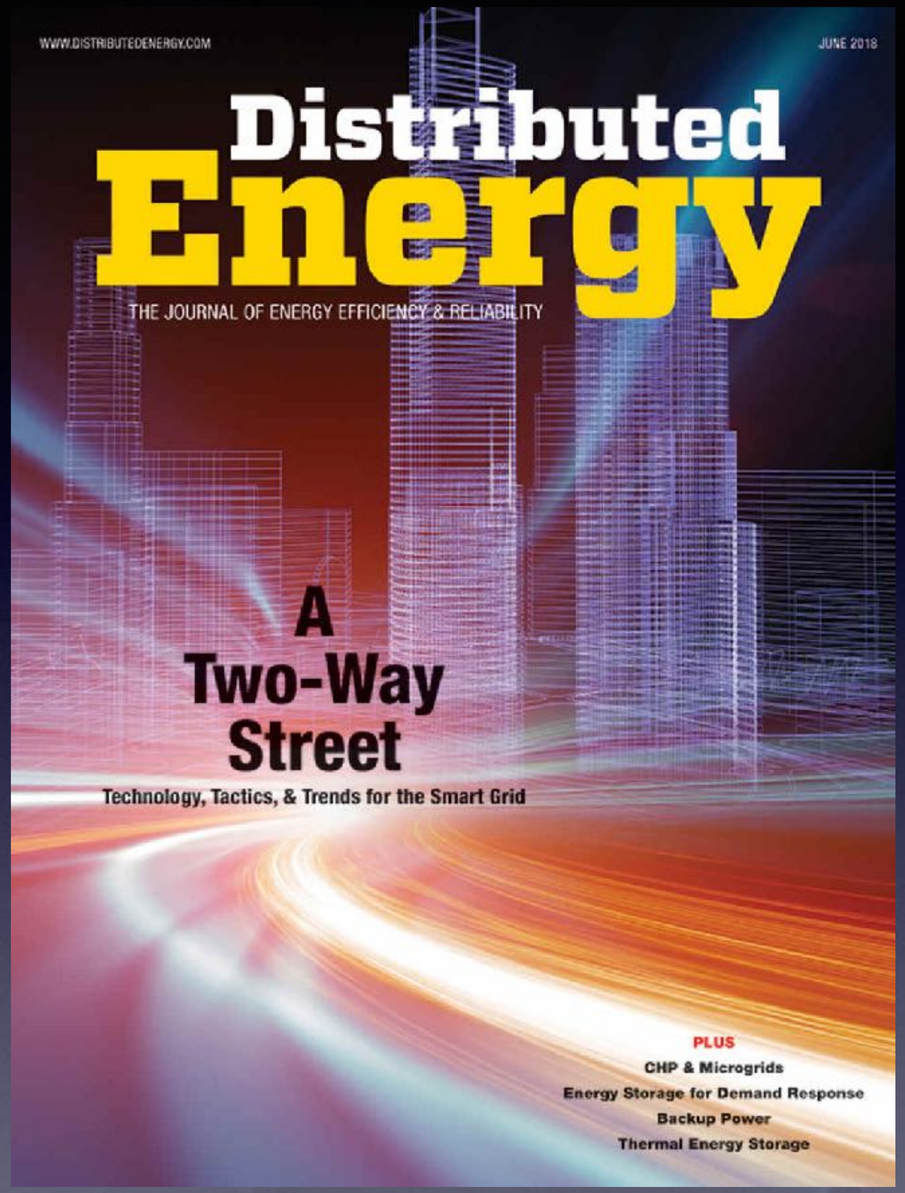
Exposed and Decaying

Entropy is Ruthless



A Resilient + Reliable Energy Source can NOT be

INTERDEPENDENT



Energy is Spirit

Centralized Energy alone CAN NOT deliver essential Energy Flow when needed

The Soviet Union Collapsed Because?

It is Illegal to BUY and Sell Power and Services in the Sunshine State of Darkness

Utilities may put themselves out of business if they hold on to one-way service

No solar, please — we're Florida

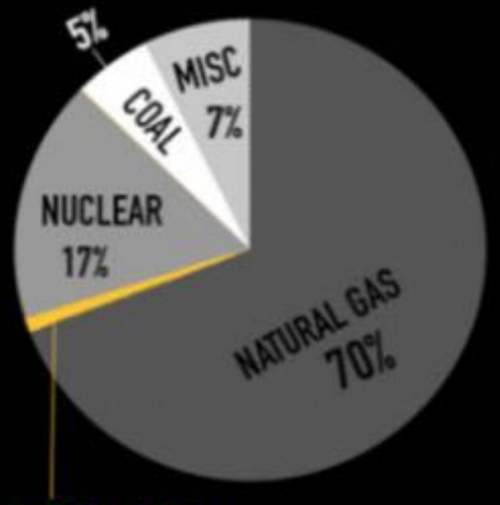
By Heather Smith

Shutterstock

WHY DOESN'T FLORIDA USE MORE SOLAR?

THE SUNSHINE STATE IS THIRD IN SOLAR ENERGY POTENTIAL, BUT 18TH IN INSTALLED POWER.

FLORIDA POWER & LIGHT ENERGY GENERATION



SOLAR
0.06%

IN CALIFORNIA, SOLAR POWERS MORE THAN **1.5 MILLION HOMES.**

IN NEW JERSEY, SOLAR POWERS MORE THAN **200,000 HOMES.**

IN FLORIDA, FPL'S THREE SOLAR PLANTS POWER **12,650 HOMES.**

FPL'S SOLAR ENERGY DISTRIBUTION DOES NOT ALLOW ENERGY SHARING BETWEEN BUSINESSES AND HOMEOWNERS

DID YOU KNOW...

- SOLAR ENERGY IS GETTING CHEAPER
- FOSSIL FUELS ARE BECOMING MORE EXPENSIVE
- UPFRONT COST OF INSTALLING SOLAR PANELS CAN ADD UP TO LESS THAN A MONTHLY ELECTRICITY BILL

POLITICS

FLORIDA DOES NOT HAVE THE **POLICIES** IN PLACE TO USE SOLAR EFFECTIVELY.

2006: FLORIDA LAUNCHES REBATE PROGRAM FOR SOLAR PANEL USERS.

2010: FLORIDA ENDS PROGRAM AFTER IT GETS TOO POPULAR.

2014: FLORIDA TAKES PROGRAM OFF THE BOOKS ENTIRELY.

FPL ARGUES THAT FLORIDA IS TOO CLOUDY TO USE MORE SOLAR ENERGY.

BUT SOLAR ENERGY ADVOCATES SAY BUILDING SOLAR PLANTS ACROSS THE STATE CAN HELP GATHER SUNLIGHT FROM ONE AREA WHILE IT'S STORMY IN ANOTHER.

SOME SCIENTISTS HAVE ALSO DEVELOPED WAYS TO STORE SOLAR ENERGY.

SOURCES: Florida Power & Light, Tampa Bay Times, Solar Energy Industries Association

Illegal to BUY and SELL kWh in the Sunshine State of Darkness

DER Distributed Energy Resources

Frees Stakeholders from obscene

MEGA Boondoggle projects

Falling EROI is cannibalizing centralized generation

WHERE does your Utility Money go?

BEWARE

Prosperity
BLACKOUT

D E R

Energy Control

is the
Ultimate Commanding
Height

Who is

Focused on
CONFISCATION
of your Rights to
harvest the SUN

SunFarm ENERGY

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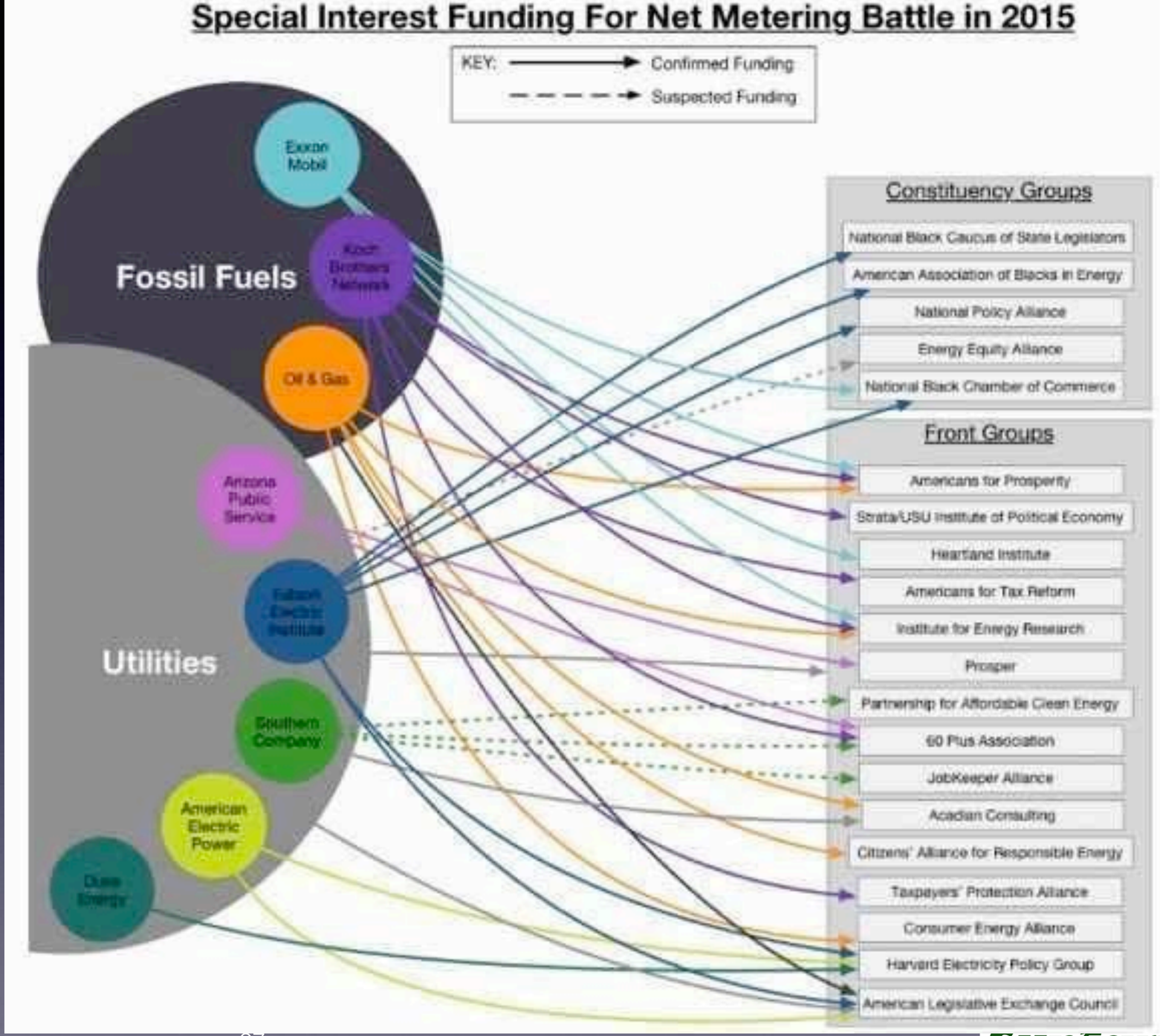
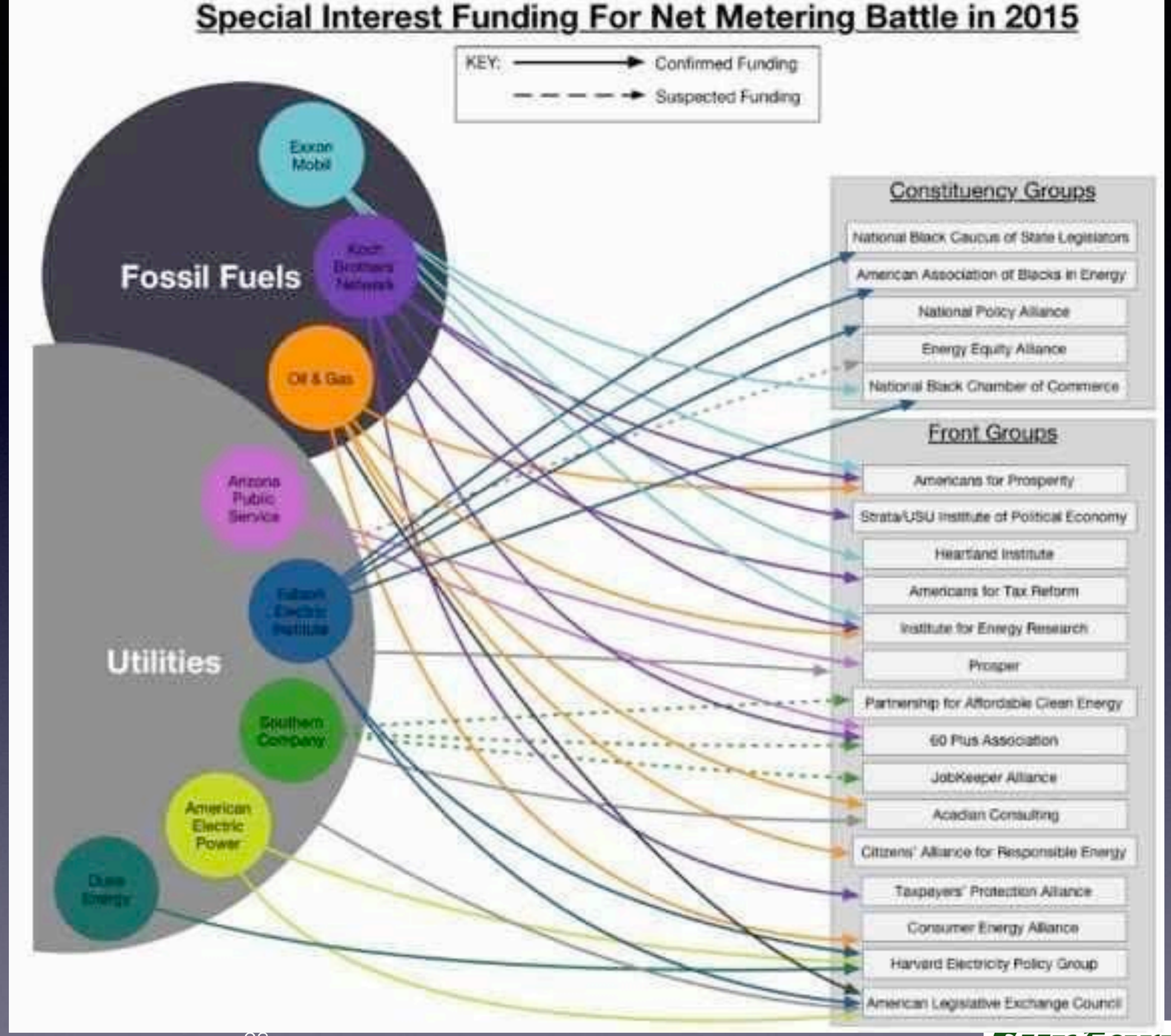


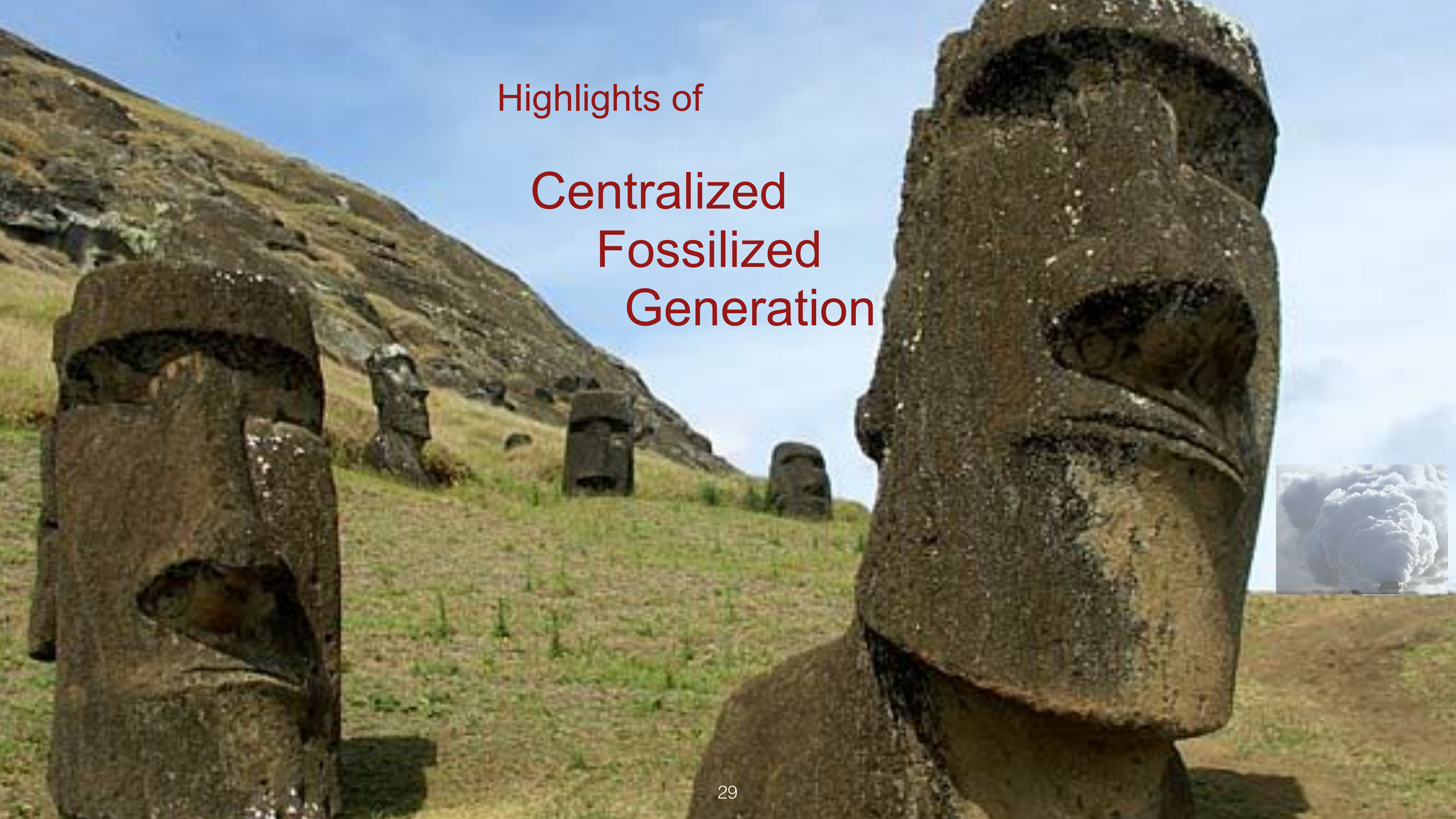
SunFarm ENERGY

26 Million spent to HALT ownership of Solar Generation in FLORIDA

Do Not Succumb to Darkness



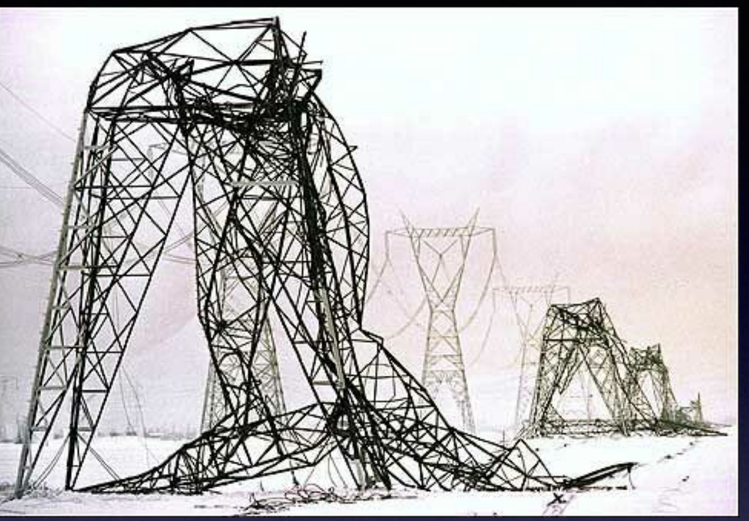
SunFarm ENERGY



Highlights of

Centralized Fossilized Generation

Will Centralized Generation be Relevant ?



Media Blackout:

Fukushima as a Level 7 Event

GE/NBC bans Bart Simpson Nuclear show

German Reactors COLD by 2022

No Safe Level of Exposure to Radionuclides

90+% Uranium Imported

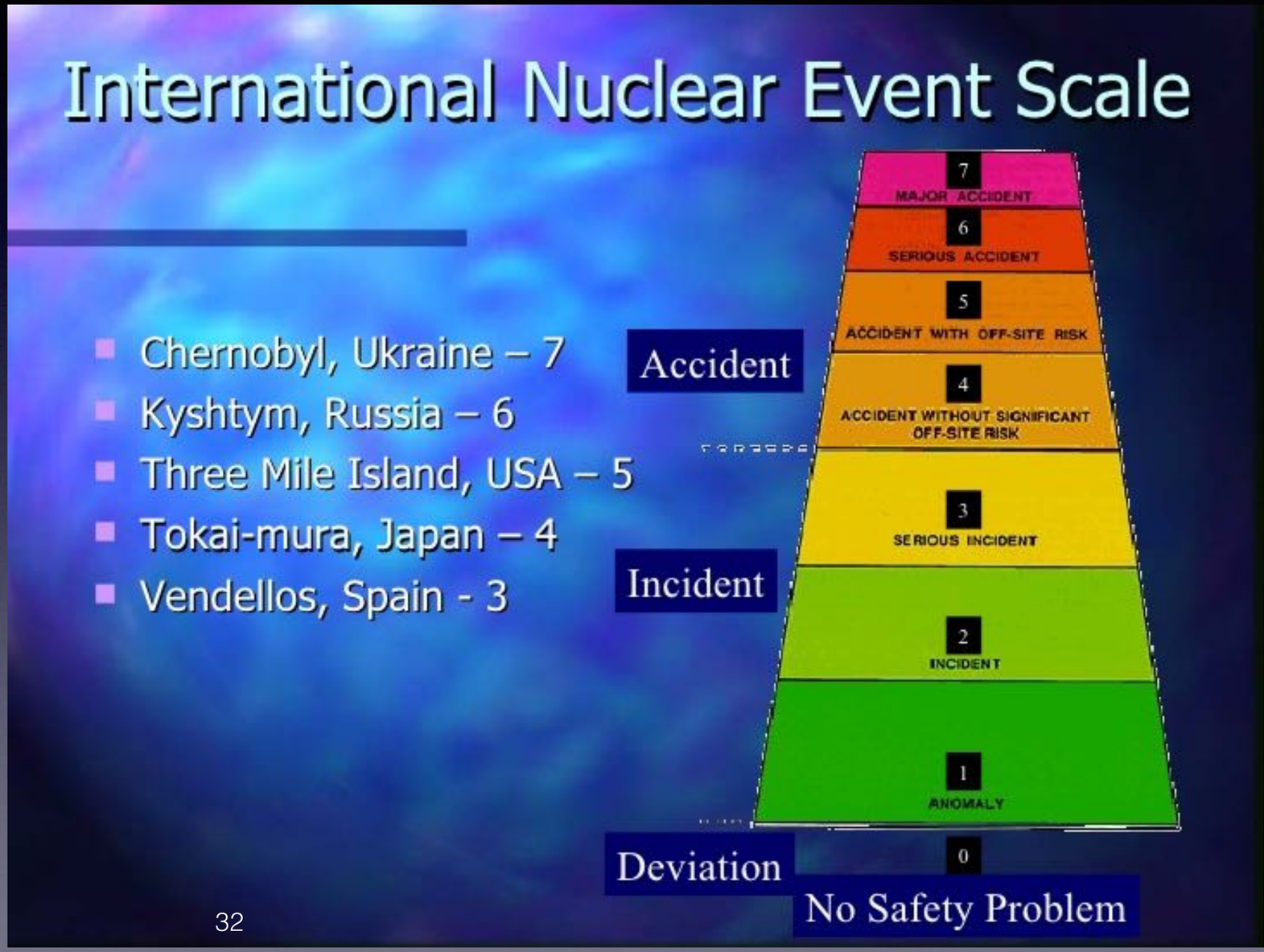
100% Death Rate in Beagle Study of Femto particle Pu

DIVIDE BY ZERO R E S I L I A N C Y

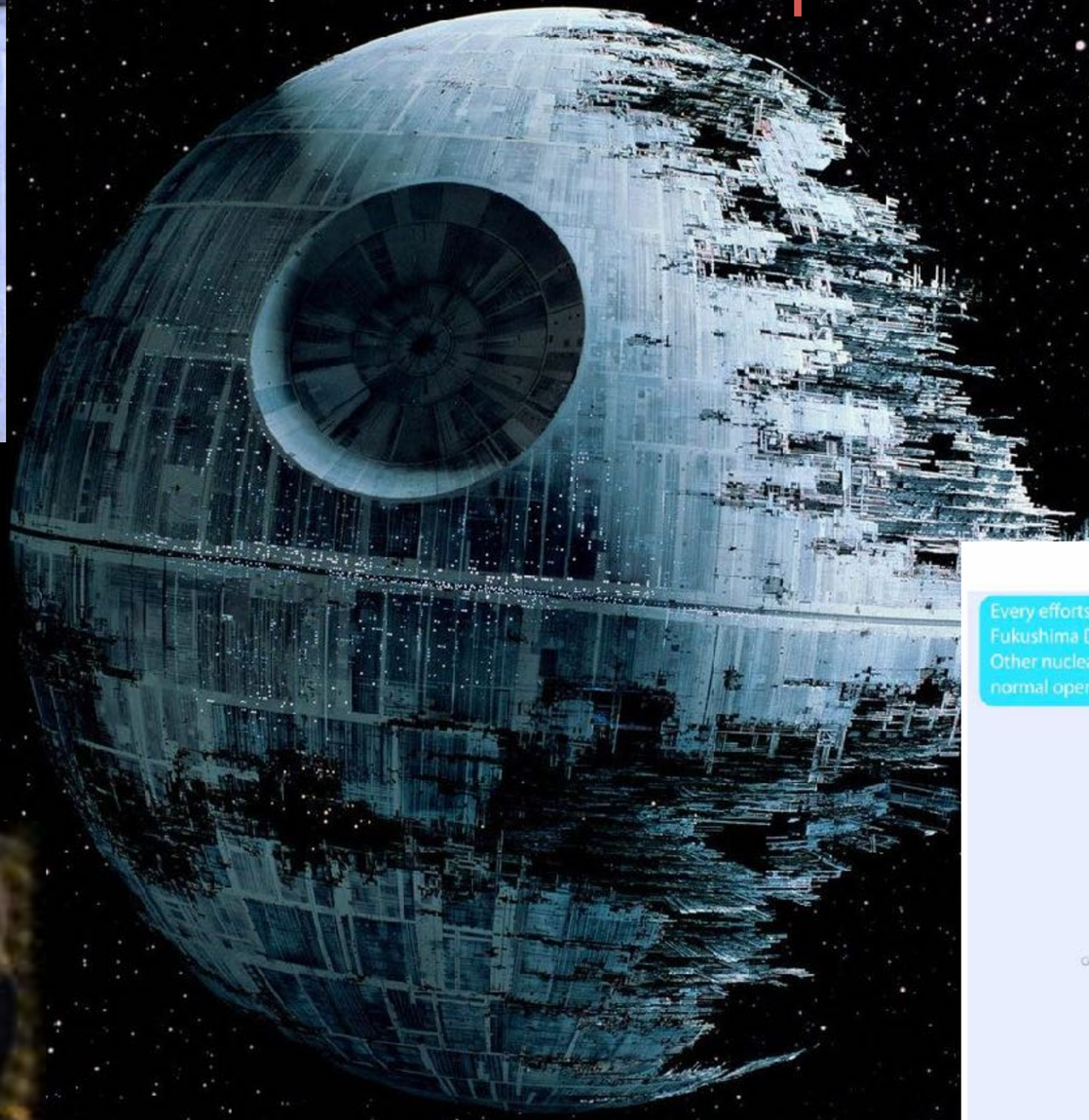
Un-Insurable Risk

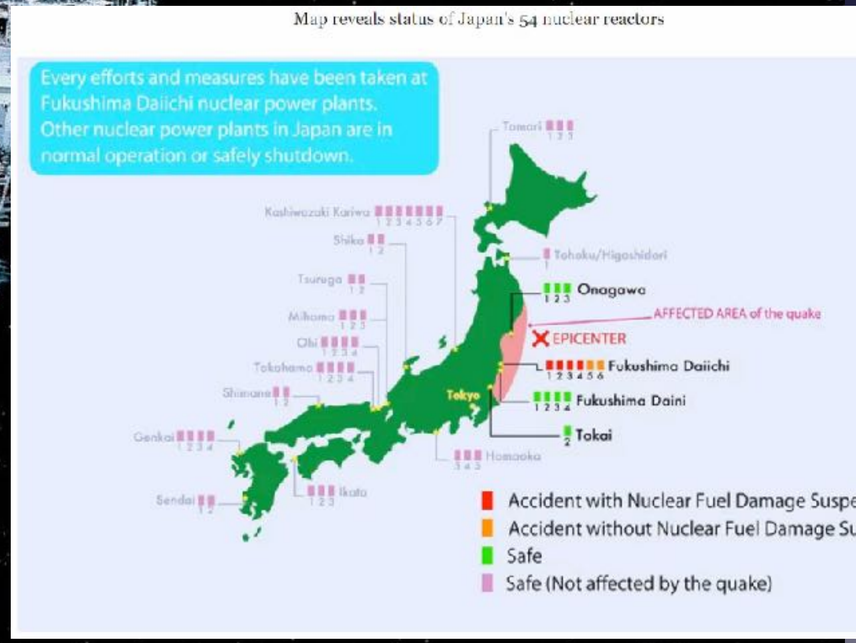
Industry in Decline

Transuranic isotope horror show without containment plan



Central Deception





"I do not believe that nuclear is worth it if it creates Radiation"

Admiral Rickover - The Father of the US Nuclear Navy Testimony before US Congress 1982

Note: This Radiation is the TransUranic radionuclide chain of elements which Decayed Billions of years ago Allowing LIFE on Planet Earth.

Effective Containment methods are developed.

Safe Isolation of Nuclear waste is a political not a technical issue

Japan Is Down to One Nuclear Power Plant

Bryan Lufkin
3/09/16 11:27am • Filed to: JAPAN
126 11

Workers of Fukushima Daiichi (Christopher Furlong / Getty)

Japan has closed one of its two remaining operational nuclear plants. The shutdown comes just days before the fifth anniversary of a catastrophic earthquake that triggered a tsunami and the biggest nuclear meltdown since Chernobyl.

Vogtle 3 nuclear island under construction in October 2016. The reactor, which was supposed to come on-line in April 2016 is only 36% complete despite the company's adding more than 1,000 additional workers. PSC construction monitors warn that all of Georgia Power's efforts to pick up the pace of construction have failed so far and the project is likely to experience further delays. Photo ©2016 Georgia Power

THE MOST EXPENSIVE

Gadget on EARTH

BANKRUPTED THE MIGHTY 1899

WESTINGHOUSE

ELECTRIC COMPANY

Our Great Great Great GrandChildren's Curse

SunFarm ENERGY

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NO ONE is Accountable

Nuclear prices itself out of the market, Sorry you must pay anyway

SunFarm ENERGY

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27 Billion and Climbing

Nuclear prices itself out of the market, Sorry you must pay anyway

SunFarm ENERGY

What is your Energy Situational Awareness?

Energy Secretary Rick Perry: 'True energy independence is finally within our grasp'

- Energy Secretary Perry says the U.S. is producing more energy due to innovation, deregulation and pro-growth policies.
- "Nowhere is this stunning turnaround more dramatic than with natural gas," he writes.

COMMENTARY

Rick Perry, U.S. Secretary of Energy

Published 9:11 AM ET Sun, 29 July 2018 | Updated 9:41 AM ET Sun, 29 July 2018

CNBC

Joshua Roberts | Reuters

Energy Secretary Rick Perry

ART of Energy Deception

PROPAGANDA: US ENERGY INDEPENDENCE

Current USA infrastructure REQUIRES CHEAP CRUDE (API <40).

Extraction of LIGHT OIL in the US will last 40-400 months.

LIGHT OIL is unusable for most US Refineries

Energy Secretary Rick Perry: 'True energy independence is finally within our grasp'

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REALITY: COMPLETE DEPENDENCE ON CHEAP OIL

Hundreds of Billions of losses in Upstream Shale provides Downstream Economic Prosperity

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ART of Energy Deception

The US is NET Energy IMPORTER with no Surplus.

For Now
Imported Crude is Vital for Almost Everything
10.08 mbd as per 2017 BP SR)

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The US is NET energy Consumer without Surplus.

Dependence on a Single Declining Resource can be a big mistake

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NATIONAL "Energy Independence"

is NONSENSE

Such delusion is Dangerous

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Energy Secretary Rick Perry

- Grid Expectations -

Decimation by

Russian Planted Squirrels

Exposed Unidirectional Electron Vortex

1% Fuel Short for milliseconds > Adios Life Support

UNCONVENTIONAL

Natural Gas

IS

A Temporary BRIDGE Fuel

V O L A T I L E - Explosive

V O L A T I L E - Price was $8.00

A WASTE Product for fuel producers

SunFarm ENERGY

UNCONVENTIONAL

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A WASTE Product for fuel producers

NEVER Liquid at Room Temperature

SunFarm ENERGY

UNCONVENTIONAL

Natural Gas

IS

A Temporary BRIDGE Fuel

USA is NET Importer of NG

Last 39 out of 40 years

SunFarm ENERGY

UNCONVENTIONAL

Natural Gas

The Crack Cocaine of Energy

Currently priced @ 15% cost of Liquid Fuel !

"Producers require $4 /mcm @ the wellhead"

American Gas Association

It works till it doesn't

Warning: Prosperity will be challenged as price Normalizes

SunFarm ENERGY

UNCONVENTIONAL

Natural Gas

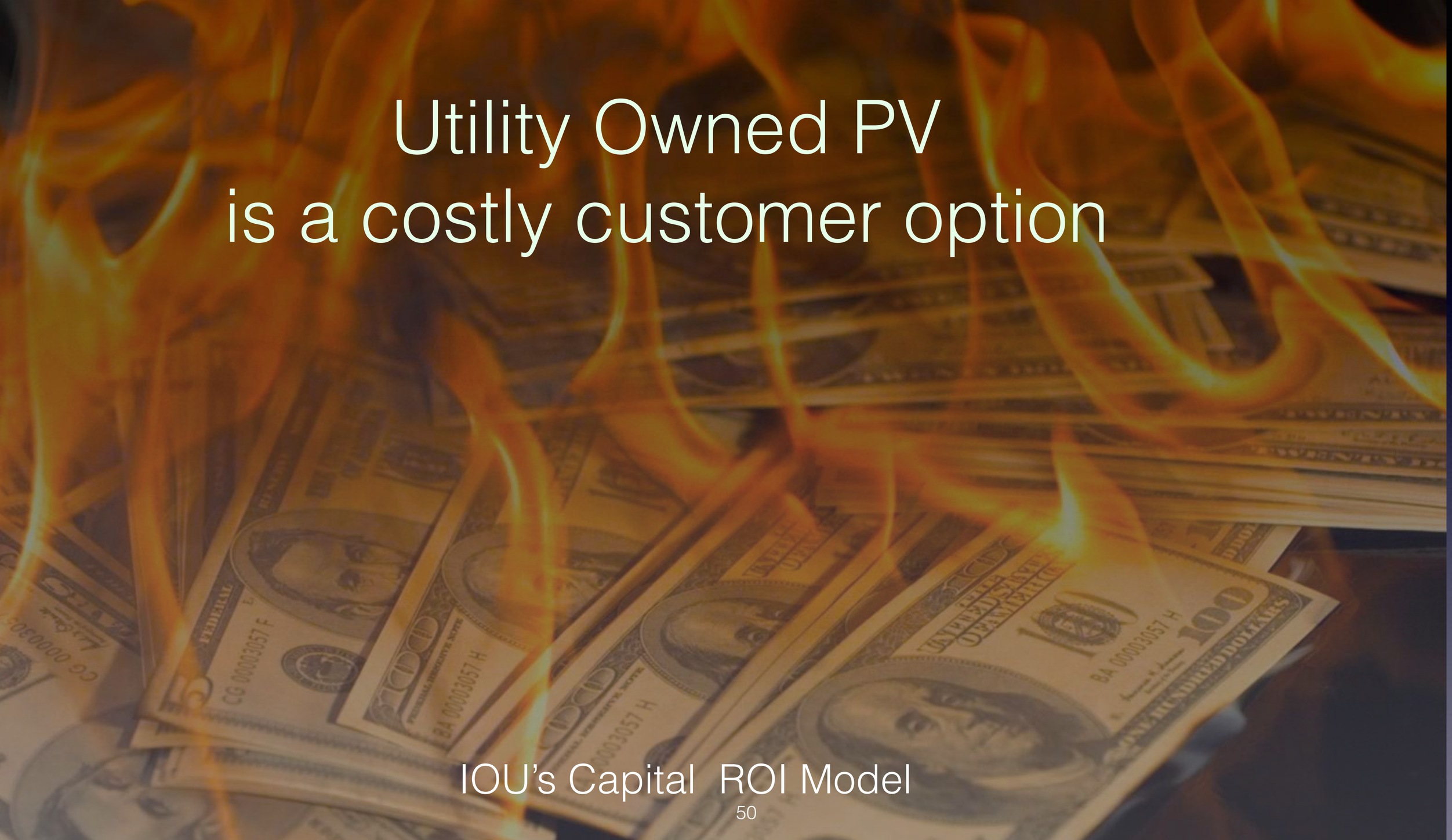
IS

A Temporary BRIDGE Fuel

V O L A T I L E - Explosive

V O L A T I L E - Price $2.00 - $8.00

Utility Owned PV is a costly customer option



IOU's Capital ROI Model

A Single $300 UTILITY Owned PV Panel costs a Customer Thousands$

IOU's Capital ROI Model

A Single $300 UTILITY Owned PV Panel costs a Customer Thousands$

T H I N K A B O U T IT

Reality Check > New Definition of TOXIC ASSETS

Solar PV is not just Disruptive

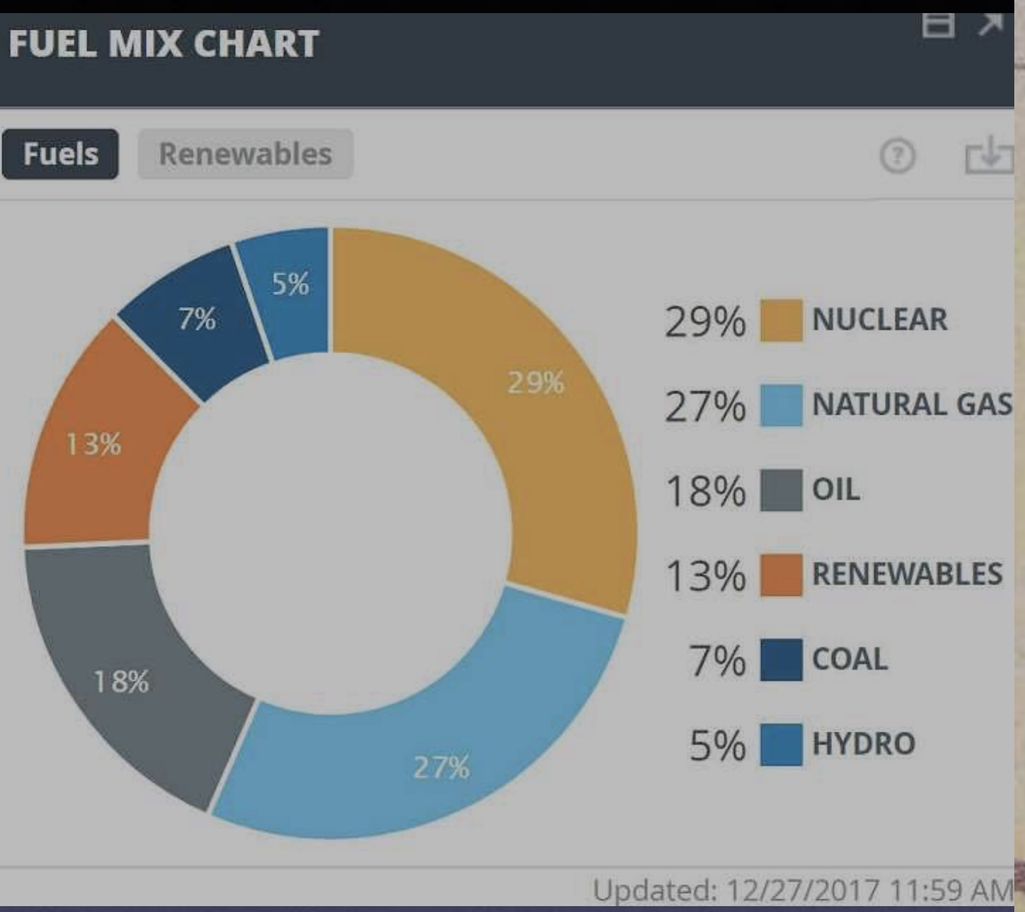
Bankrupts "too Centralized to Fail" Assets

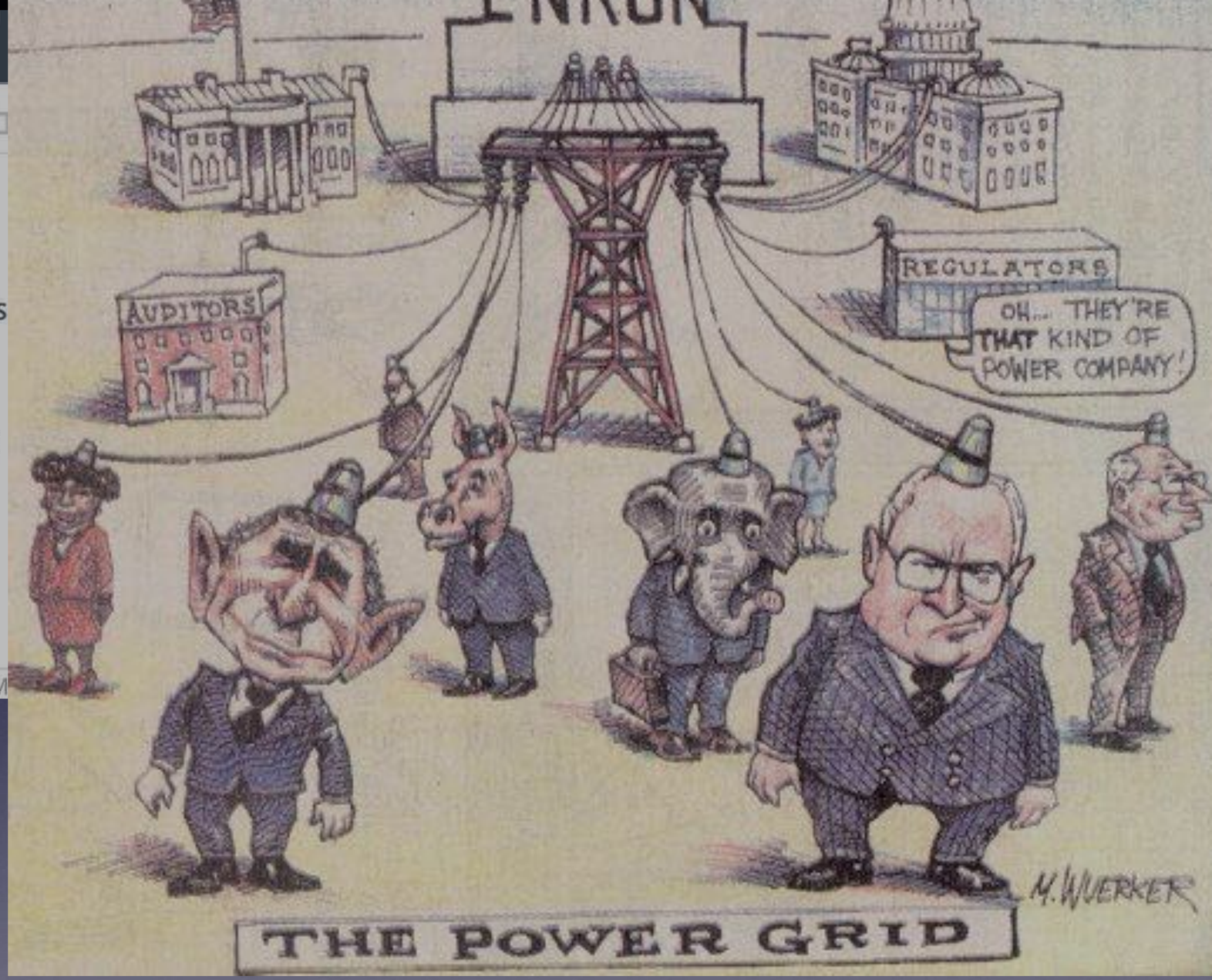
Reality Check > New Definition of TOXIC ASSETS

Solar PV is not just Disruptive

Bankrupts "too Centralized to Fail" Assets

despite futile protection attempts





Are you Aware of your Life's Energy Dependency?

SunFarm ENERGY

My Energy MIX?

End Of Life
UnStable/Interrupt-able
Fragile, UnResilient
Wide Broadcast of Toxins
Health and Cancer Risks
Subsidized Trillions/year
Taxed Unfairly
Source of Terrorism
Source of Conflict and war
Source of Poverty

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Taxed Unfairly
Source of Terrorism
Source of Conflict and war
Source of Poverty

Single PointS of Failure
Wrecks Local Economies
Centralized/Complex
Corrupts Lawmakers
Uncertain Future
Corrosive to Democracy
Archaic
#1 Target in any Conflict

SunFarm ENERGY

OILPRICE.com
The No. 1 Source for Oil & Energy News

What Will You Do When The Lights Go Out? The Inevitable Failure Of The US Grid

By Julianne Geiger - Aug 12, 2016, 5:27 PM CDT

Delta Airlines recently experienced what it called a power outage in its home base of Atlanta, Georgia, causing all the company's computers to go offline—all of them. This seemingly minor hiccup managed to singlehandedly ground all Delta planes for six hours, stranding passengers for even longer, as Delta scrambled to reshuffle passengers after the Monday debacle.

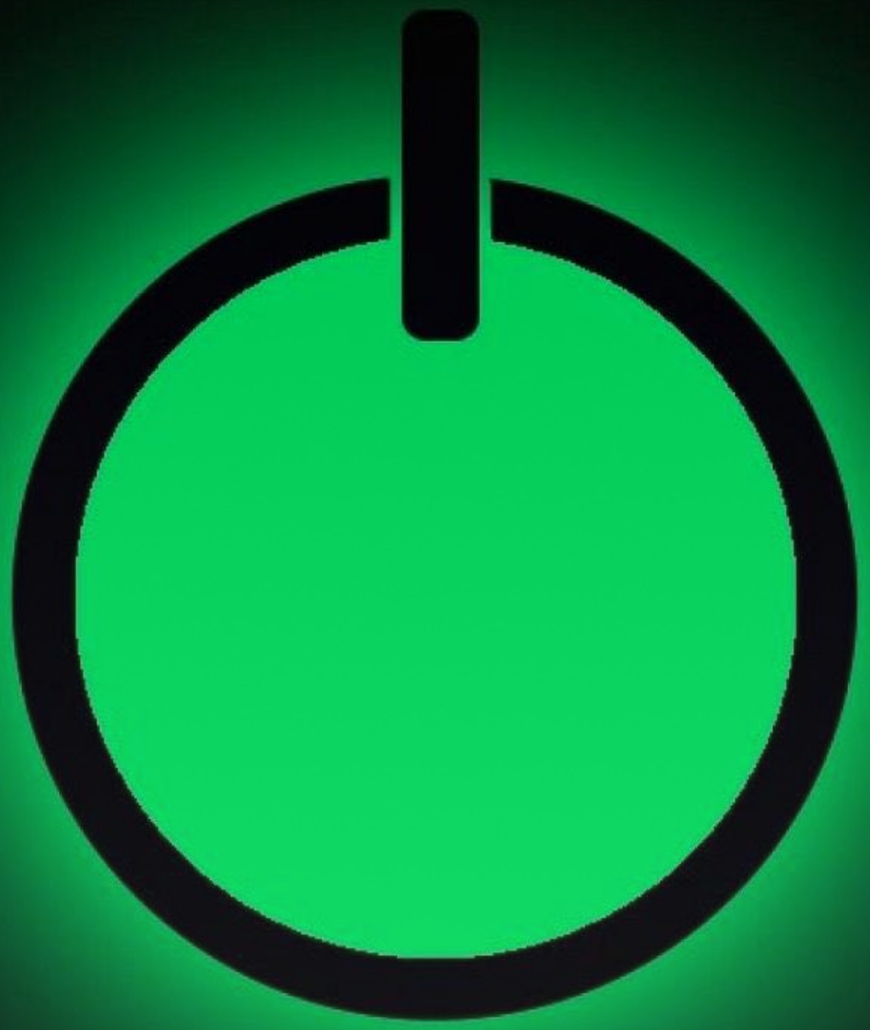
Where Delta blamed its catastrophic systems-wide computer failure vaguely on a loss of power, Georgia Power, their power provider, placed the ball squarely in Delta's court, saying that "other Georgia Power customers were not affected", and that they had staff on site to assist Delta.

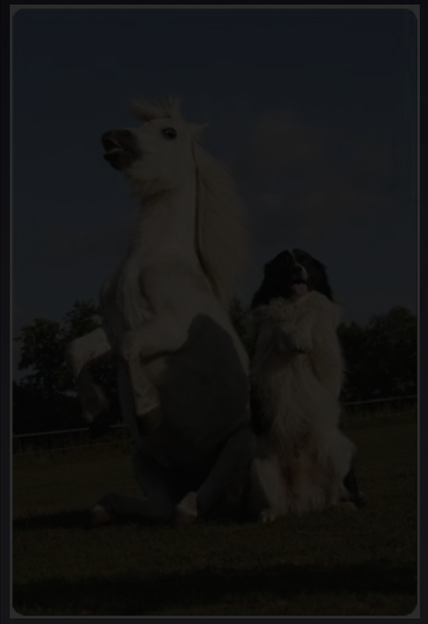
GRID Interdependencies

Constant Importation of Heavy Hydrocarbons

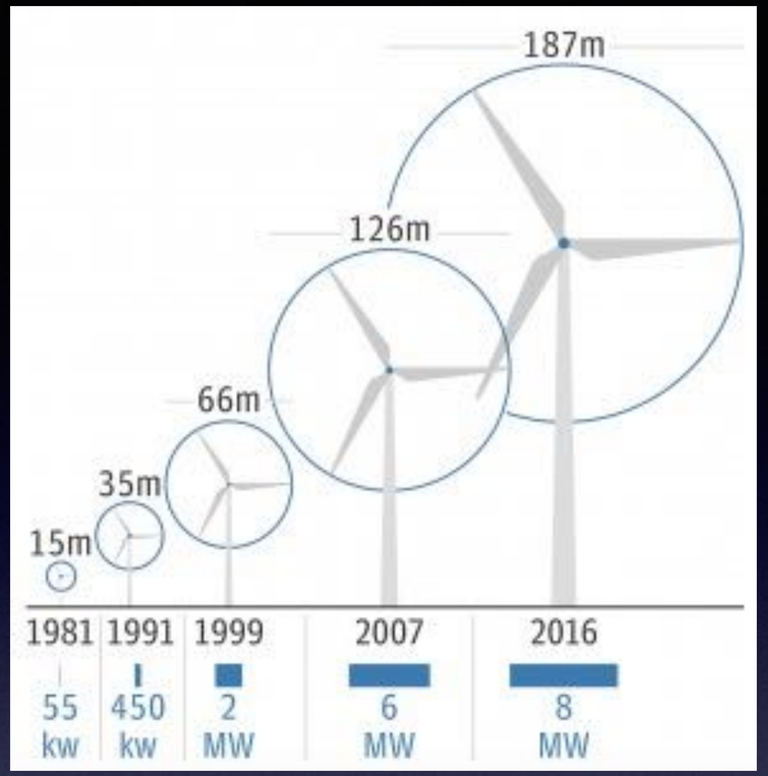
Target #1 in all Conflicts

Ch 3 - Ascension of DG





Wind Power is Best for
Rural deployment …
Mostly Centralized Energy

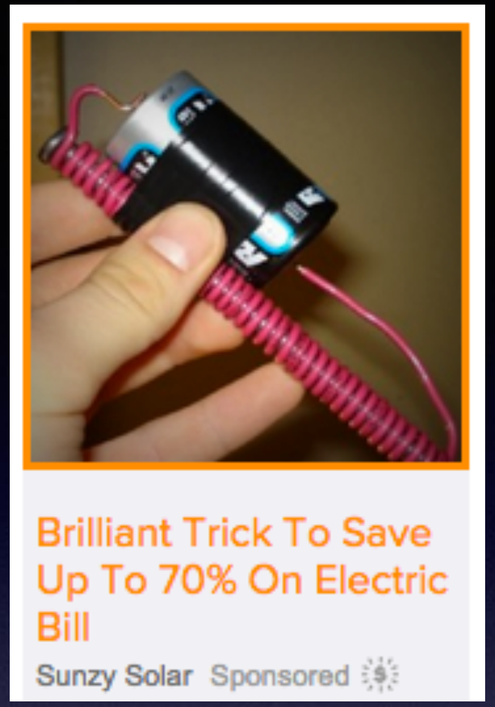


Solar PV = Dominates by Direct Conversion
of
Light into Electricity
Scaleable
Power a Phone or a City

D E R

Centralized Energy - Local Poverty - Your Wealth Exported

Distributed Energy - Local Prosperity



What are REAL Options for ENERGY INDEPENDENCE ?

Transition from Central Control /Energy dependence

Forget these Clowns ->

Energy Secretary Rick Perry: 'True energy independence is finally within our grasp'

- Energy Secretary Perry says the U.S. is producing more energy due to innovation, deregulation and pro-growth policies.
- "Nowhere is this stunning turnaround more dramatic than with natural gas," he writes.

COMMENTARY

Rick Perry, U.S. Secretary of Energy

Published 9:11 AM ET Sun, 29 July 2018 | Updated 9:41 AM ET Sun, 29 July 2018

CNBC

Joshua Roberts | Reuters

Energy Secretary Rick Perry

Distributed Energy is a Fountainhead of Prosperity

SuperCharges the LOCAL Economy

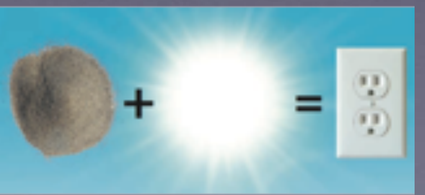
Sustainable Development

Localizes self-sufficiency

DER

Solar PV 2.0 has Arrived.

Bankable PURE POWER
GRID Independent
Toxic Batteries not needed for full production.
Any Load or Thermal Storage
Universal Battery Support
Intelligent Load Matching
Simple - No Fuel
MILLIONS of Installations



SunFarm ENERGY

Solar PV 2.0 has Arrived.

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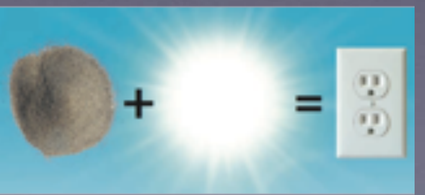
GRID Independent
Toxic Batteries not needed for full production.
Any Load or Thermal Storage
Universal Battery Support
Intelligent Load Matching
Simple - No Fuel
MILLIONS of Installations

Modes
> MicroGrid
> Grid Support
> Sellback
> Autonomous
> VPP "Virtual Power Plant"



SunFarm ENERGY

For Life

Rooftop/CarPort PV is

- Risk Free
- ALL Costs Known
- Production Guaranteed
- Security and Certainly
- Bankable
- Non Toxic
- Life Giving Prosperity

SunFarm ENERGY

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Secure Energy Delivers

SunFarm ENERGY

PV $/kWh is LESS THAN Utility
UNDER Nickel per kWh for Rooftop

No solar, please — we're Florida

By Heather Smith

Shutterstock

DG Reached GRID Cost Parity ~2012

PV-DG NEXT-GEN IS EVERY 18 MONTHS

SunFarm ENERGY

PV $/kWh is LESS THAN Utility
UNDER Nickel per kWh for Rooftop

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Central Fossil NEXT-GEN was 1890

SunFarm ENERGY

PV $/kWh is less than
Nickel per kWh for Rooftop PV

PV-DG NEXT-GEN IS EVERY 18 MONTHS

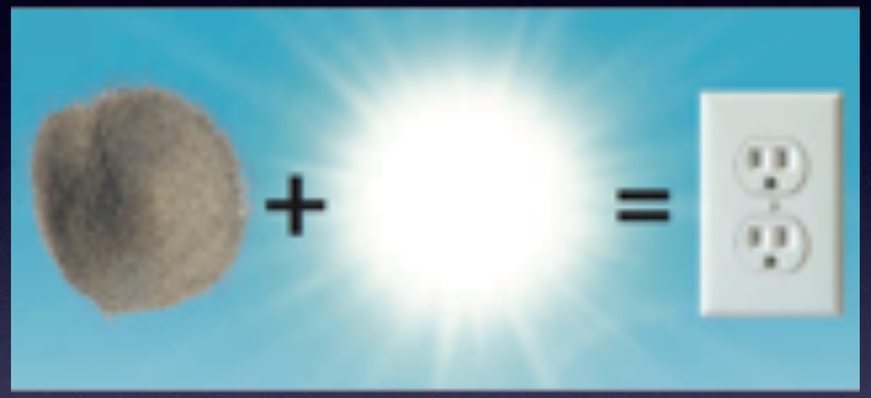
Central Fossil NEXT-GEN was 1890

SunFarm ENERGY

Solar Resources are UBIQUITOUS

PV Power is the ONLY AVAILABLE Energy under Utility Cost

Less than a Nickel per kWh



Robust and Low Tech - Metal, Sand and Glass

SunFarm ENERGY

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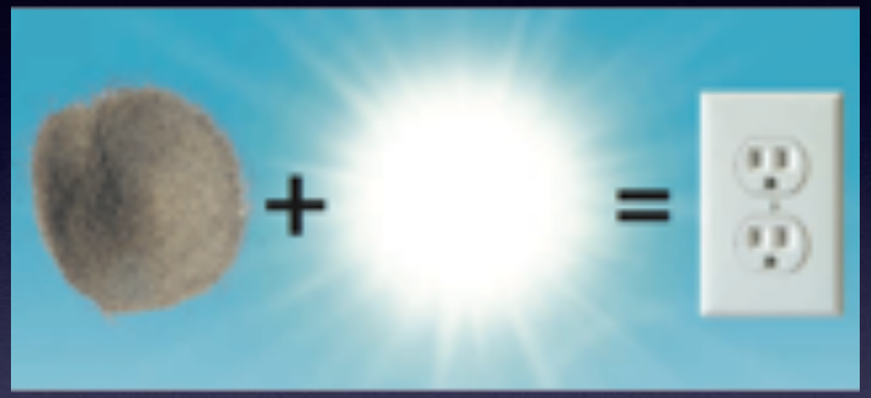

Robust and Low Tech - Metal, Sand and Glass

Harvest Prosperity with PV

SunFarm ENERGY

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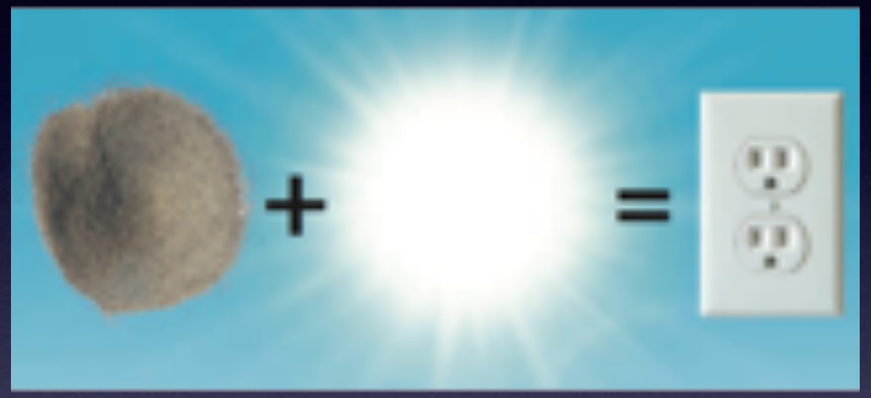


Robust and Low Tech - Metal, Sand and Glass

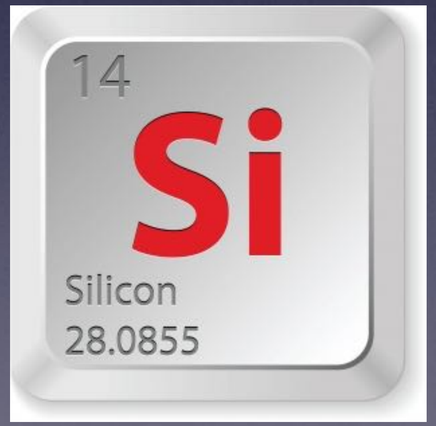
Harvest Prosperity with PV

Greater than Stock Market Returns without RISK

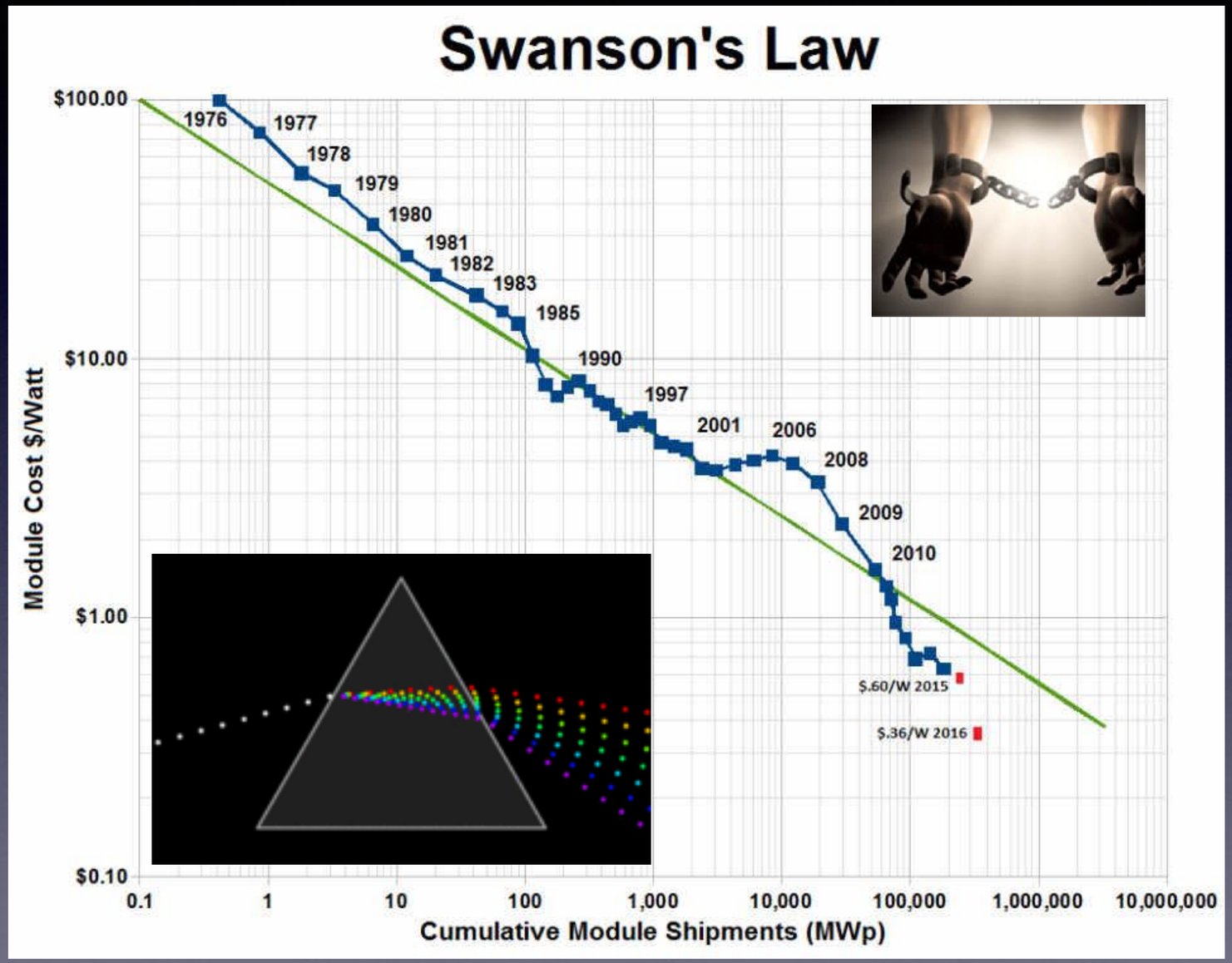
SunFarm ENERGY

Solar PV Frees the Criminal Grip on your Prosperity

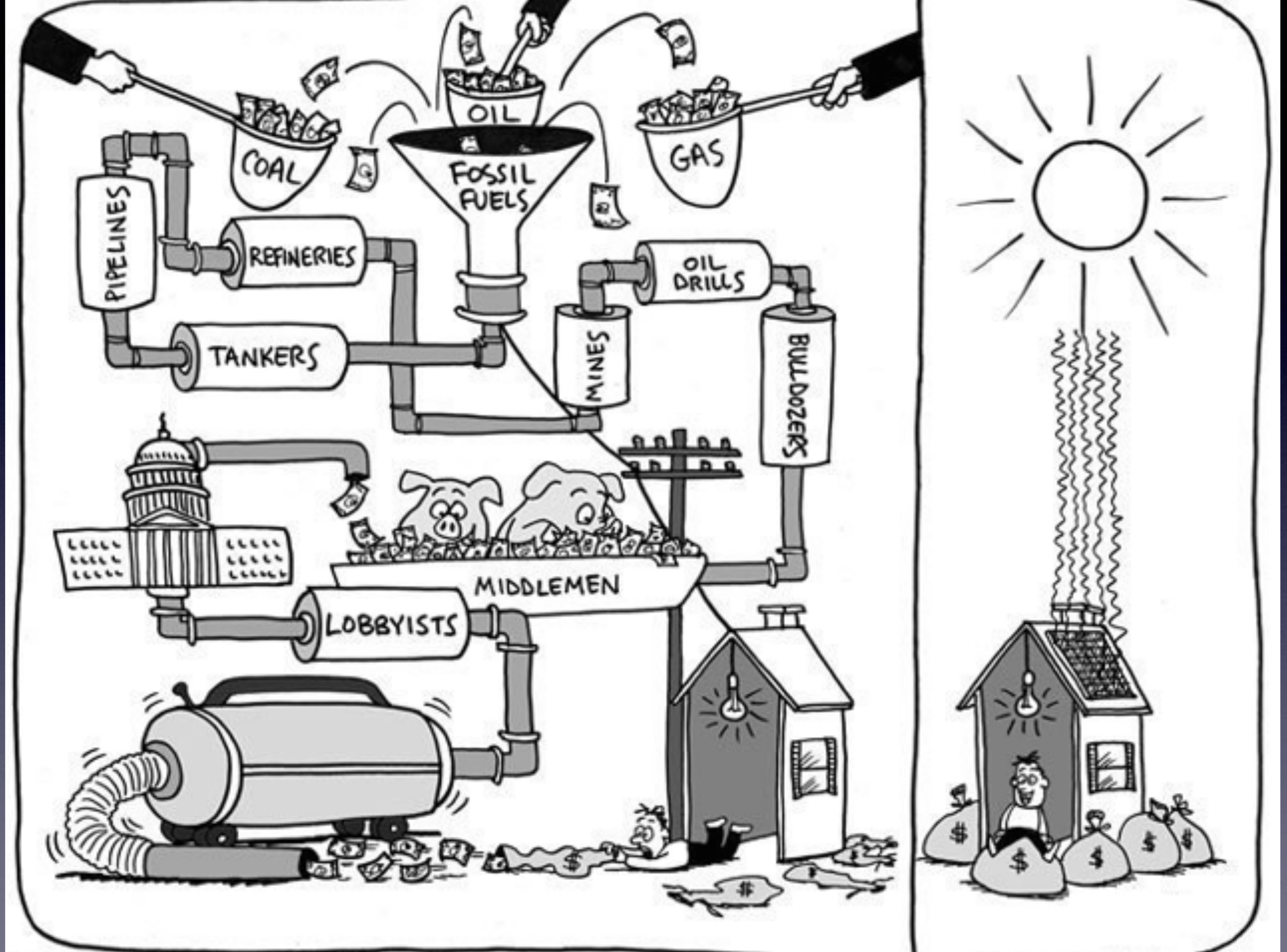
- GLOBAL COMMITMENT to Production CATAPULTS PV
- Worlds FASTEST growing Energy Source



Crystals are magic



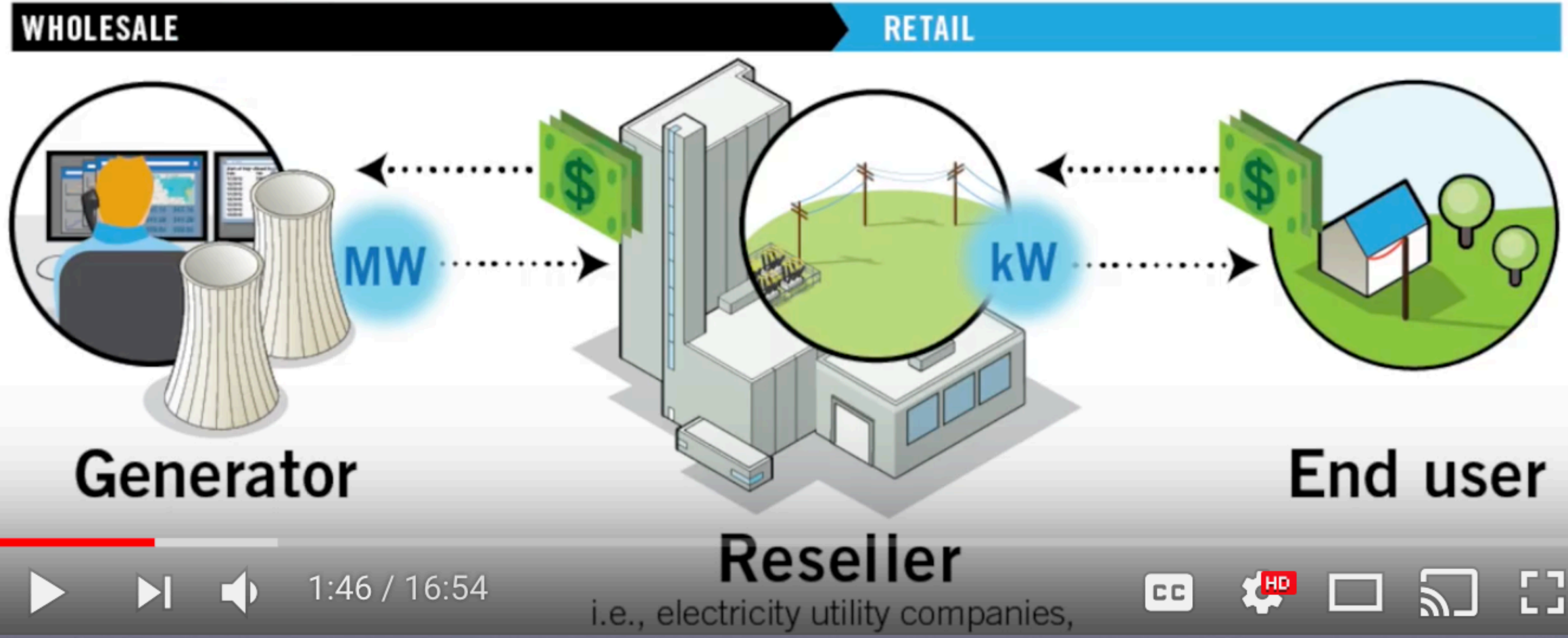
DEPENDENC



INDEPENDENCE

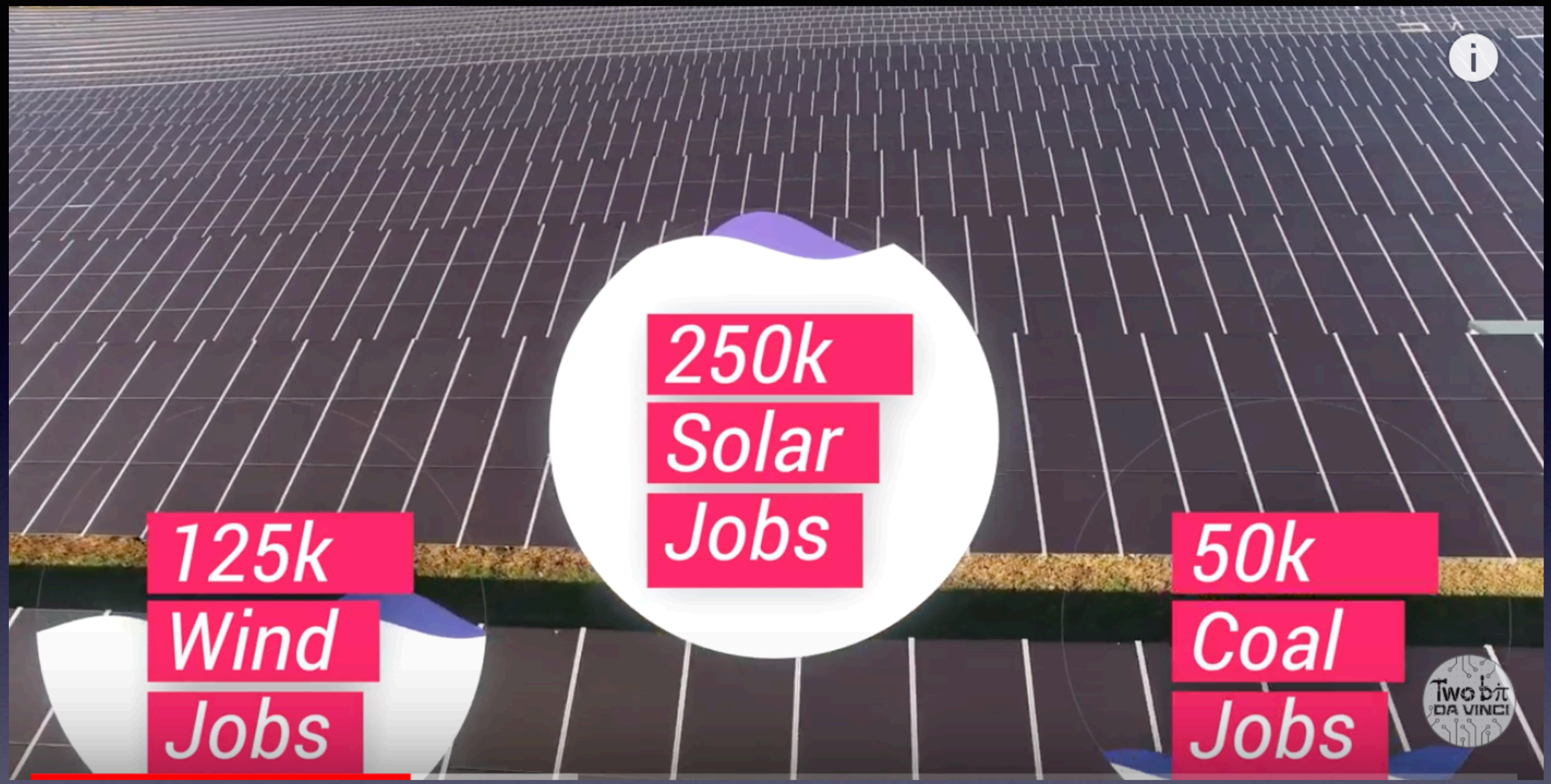
SunFarm ENERGY

If you generate more than you consume, you are now a power plant, just like the coal or nuclear plants.



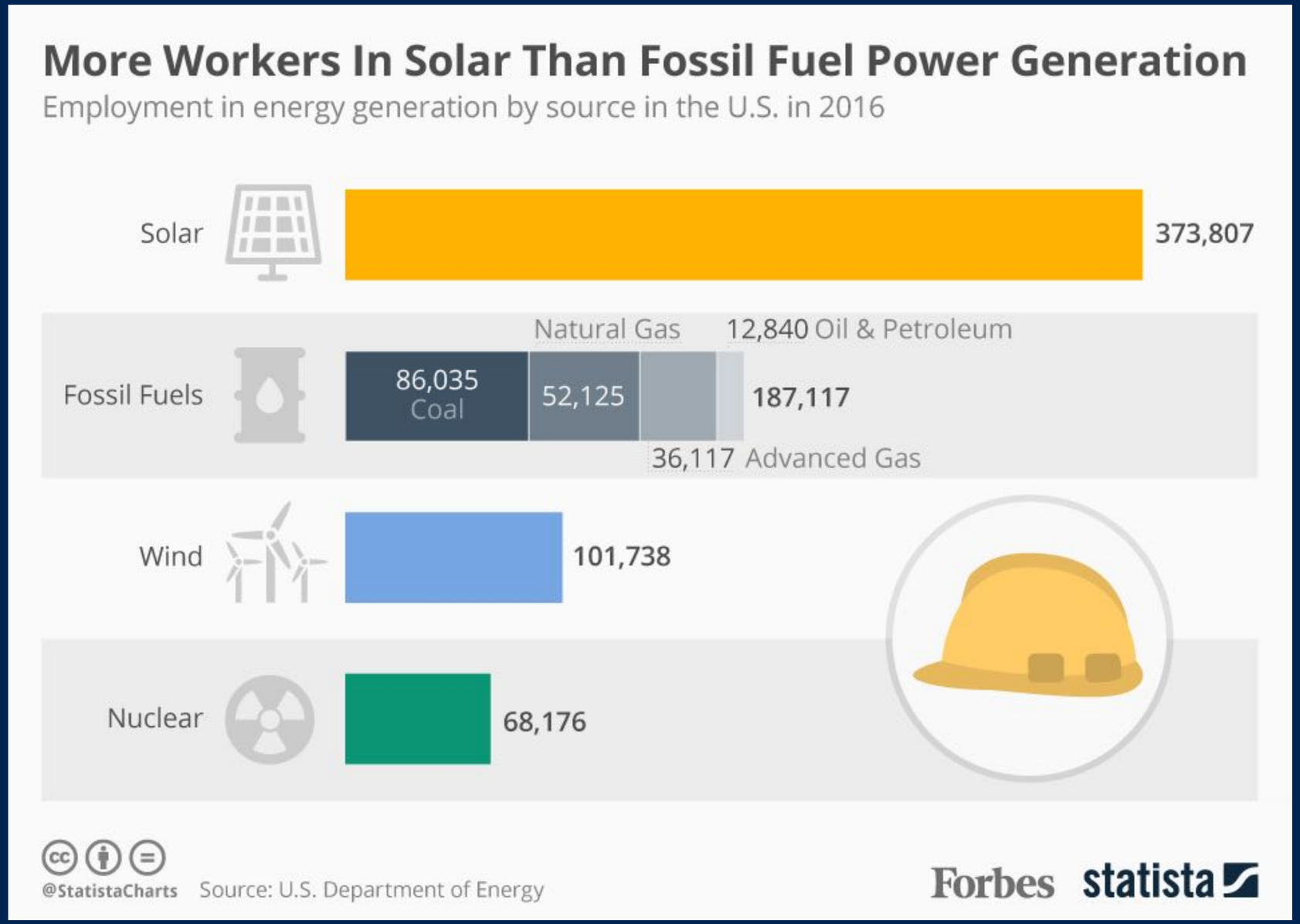
1:46 / 16:54

SunFarm ENERGY



Energy requires Infrastructure requires Jobs

SunFarm ENERGY



Energy requires Infrastructure requires Jobs

PV + Roof

Match made in Heaven

Extends Roof Life

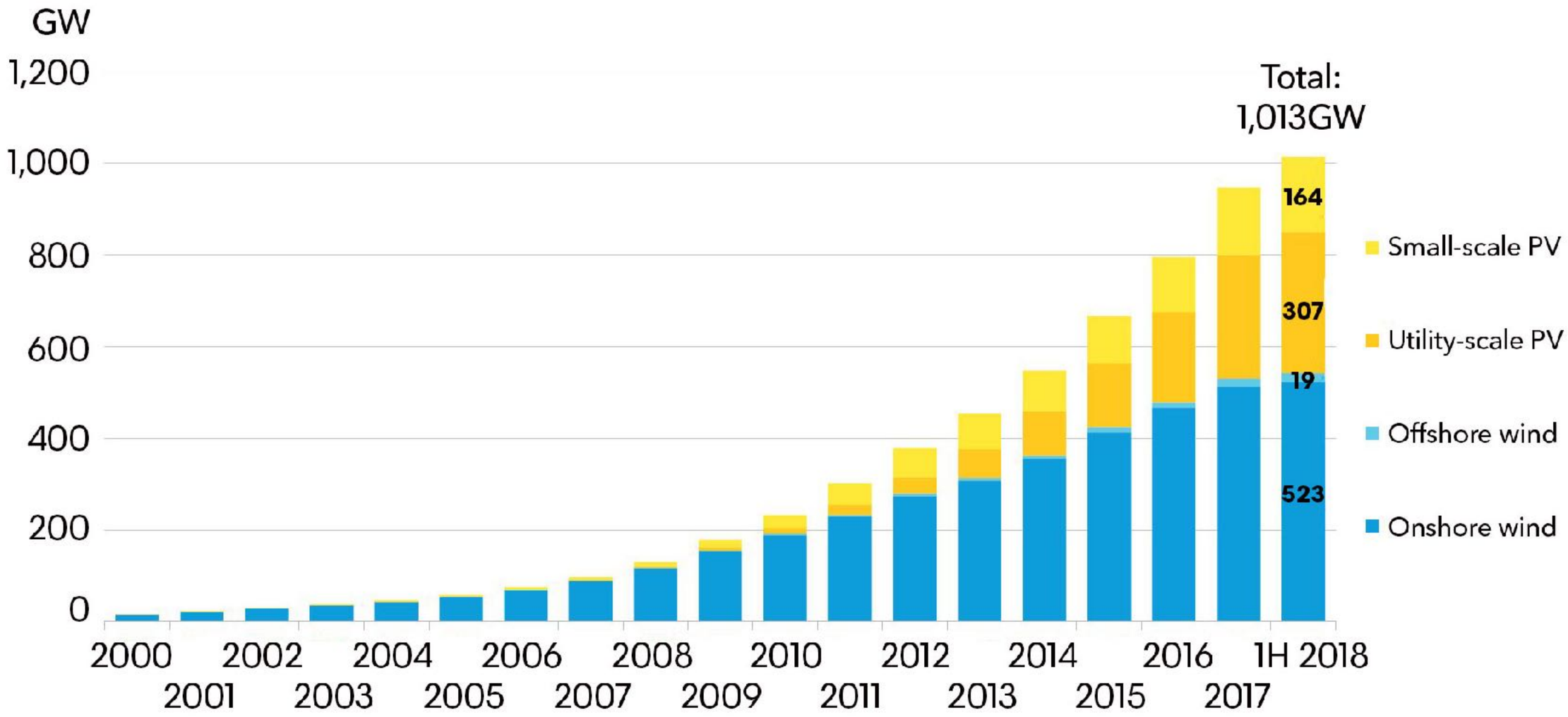
Protects Roof from flying objects

Standardized Panels swap out quickly

PV Modules blend in for EITHER Light or Dark Roofs

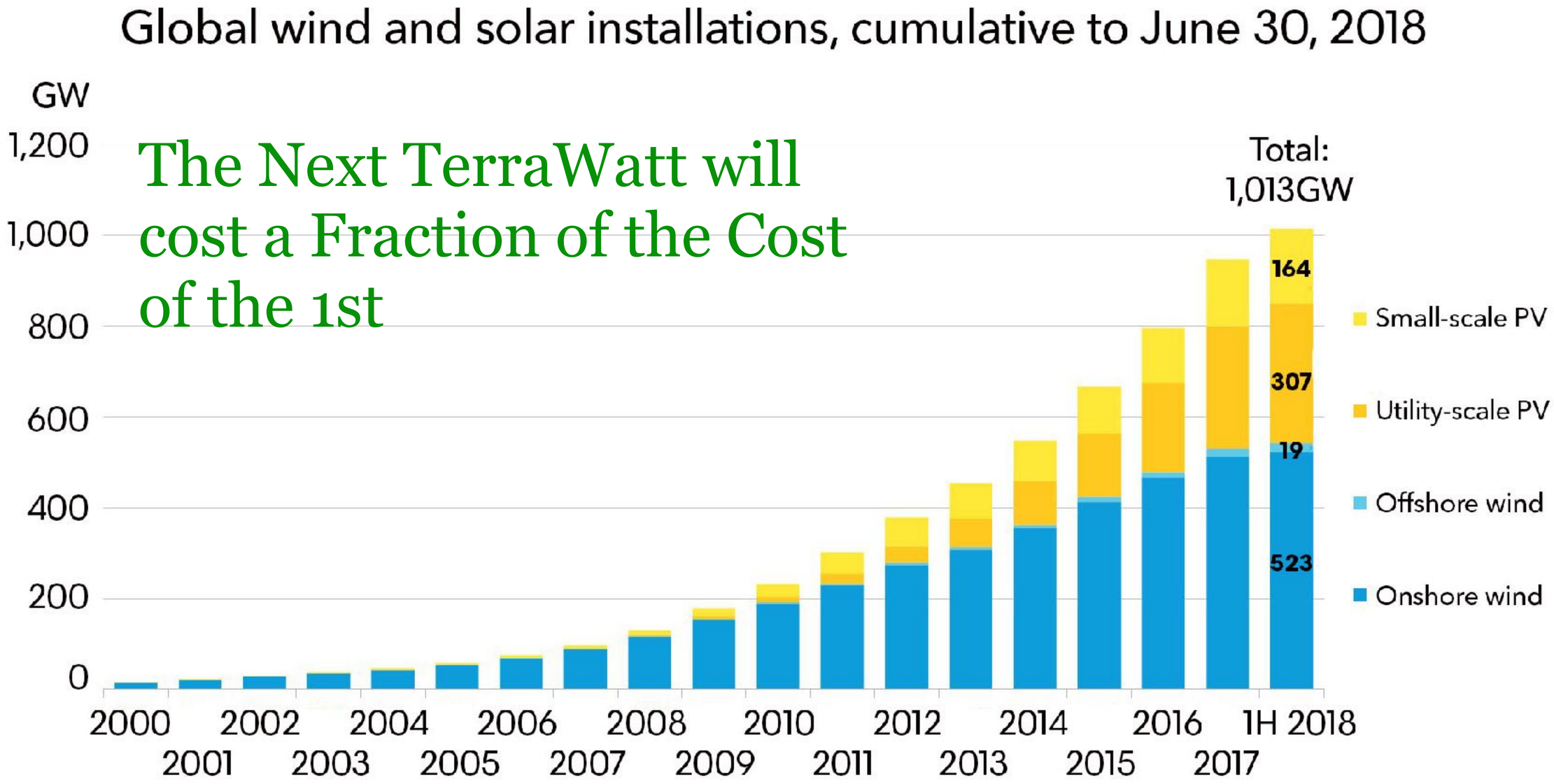
SunFarm ENERGY

Global wind and solar installations, cumulative to June 30, 2018



Source: Bloomberg NEF. Note: 1H 2018 figures for onshore wind are based on a conservative estimate; the true figure will be higher. BNEF tyipcally does not publish mid-year installation numbers.

The Next TerraWatt will cost a Fraction of the Cost of the 1st



Source: Bloomberg NEF. Note: 1H 2018 figures for onshore wind are based on a conservative estimate; the true figure will be higher. BNEF tyipcally does not publish mid-year installation numbers.

Reduce Summer Heat Stress with PV Array

100% IR Reduction Under Array

Life Extension for everything

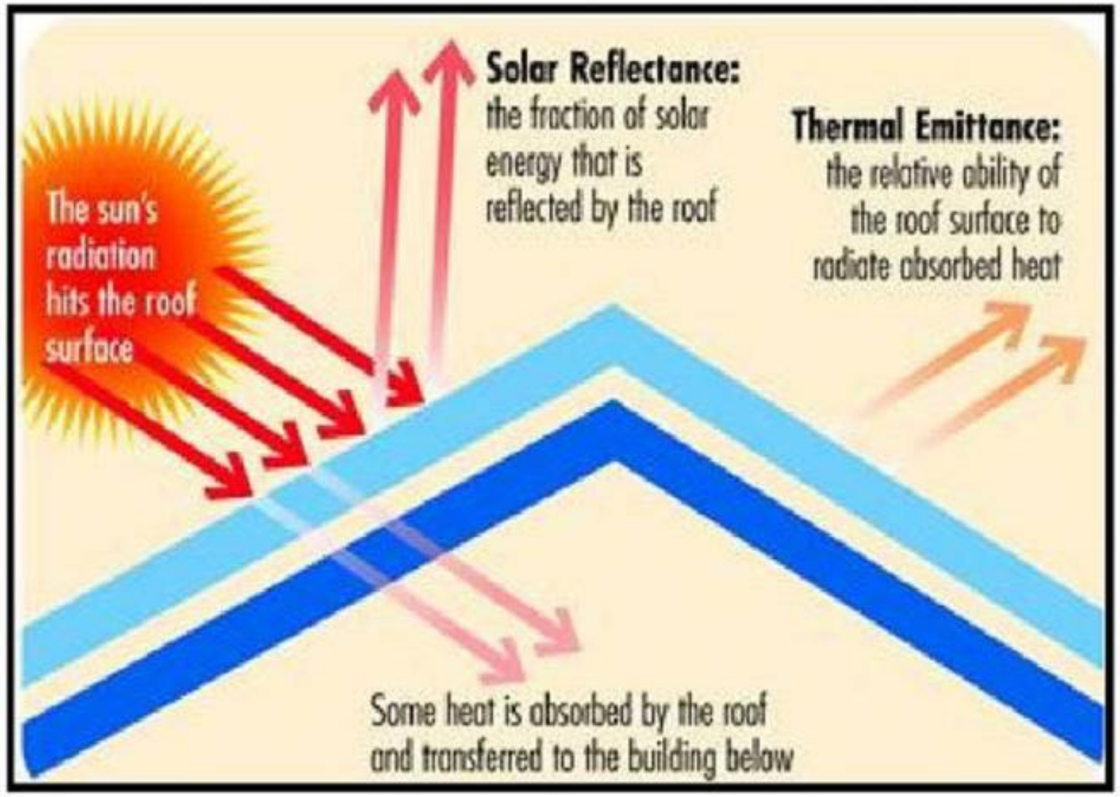
Increased Comfort

Reduced Humidity

Reduced Mold Colonization

Bonus Energy Savings of upto .1 Ton AC Reduction per kW in Summer Months

Infra-red Heat is a Killer



Typical dark roofs can absorb 90% or more of incoming solar energy, while cool roofs may absorb less than 50%. *Image Source: CRRC*

SunFarm ENERGY

The Elephant in the Room

USA Energy Score - 32 %

FAIL

66% REJECTED

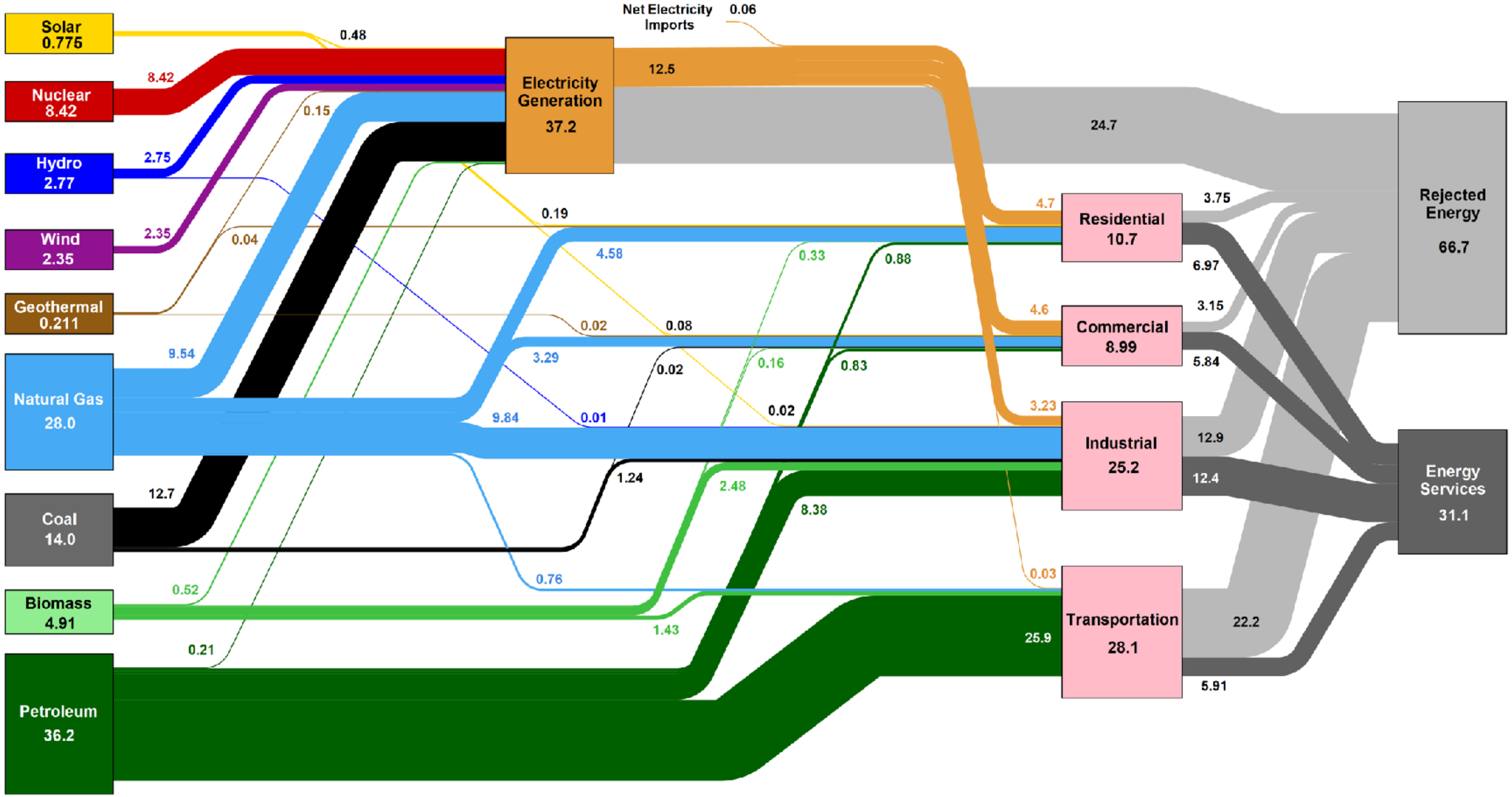
GONE

GONE FOREVER

SunFarm ENERGY

Estimated U.S. Energy Consumption in 2017: 97.7 Quads

Lawrence Livermore National Laboratory

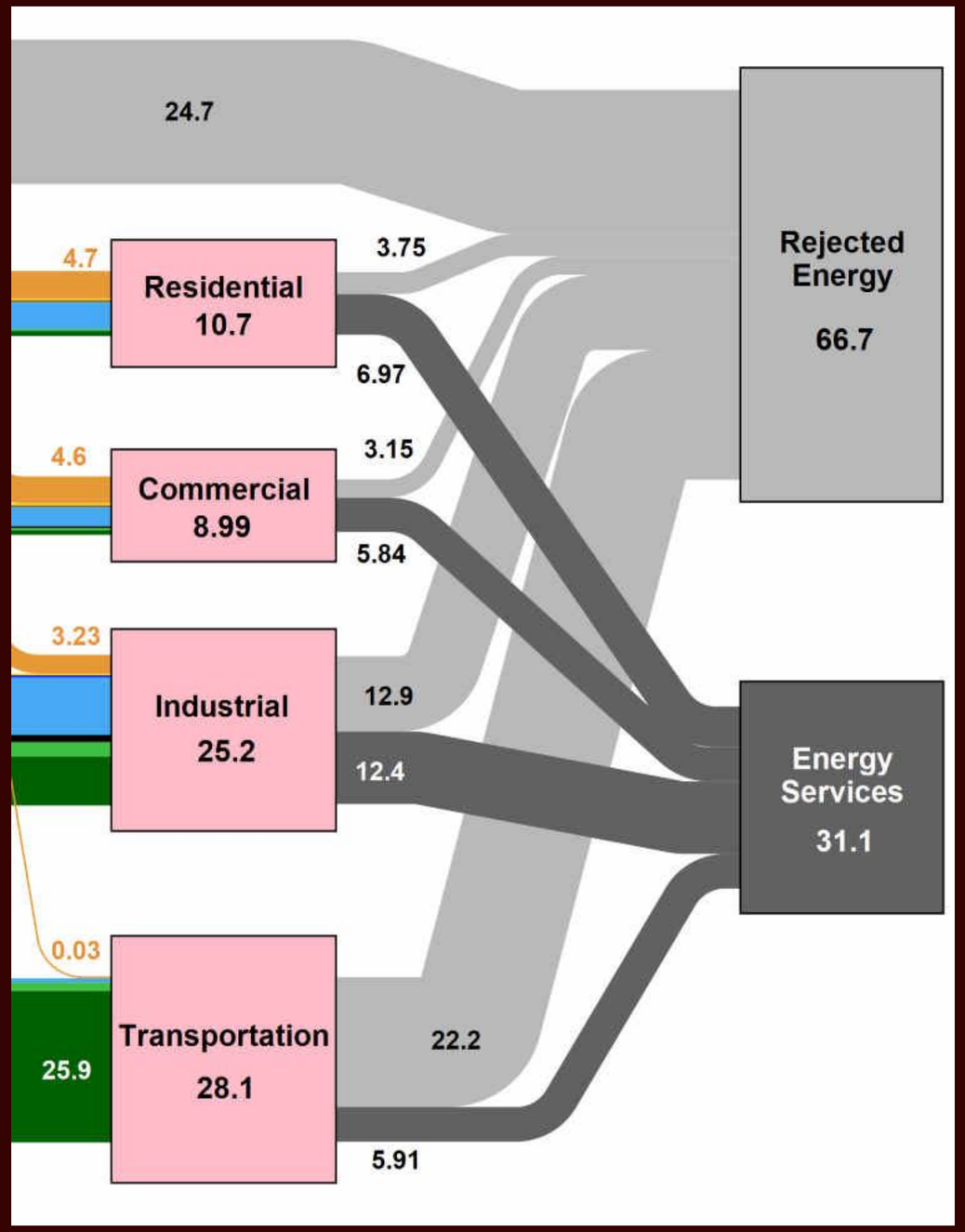


Source: LLNL April, 2018. Data is based on DOE/EIA MER (2017). If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. This chart was revised in 2017 to reflect changes made in mid-2016 to the Energy Information Administration's analysis methodology and reporting. The efficiency of electricity production is calculated as the total retail electricity delivered divided by the primary energy input into electricity generation. End use efficiency is estimated as 65% for the residential sector, 65% for the commercial sector, 21% for the transportation sector, and 49% for the industrial sector which was updated in 2017 to reflect DOE's analysis of manufacturing. Totals may not equal sum of components due to independent rounding. LLNL-MI-410527

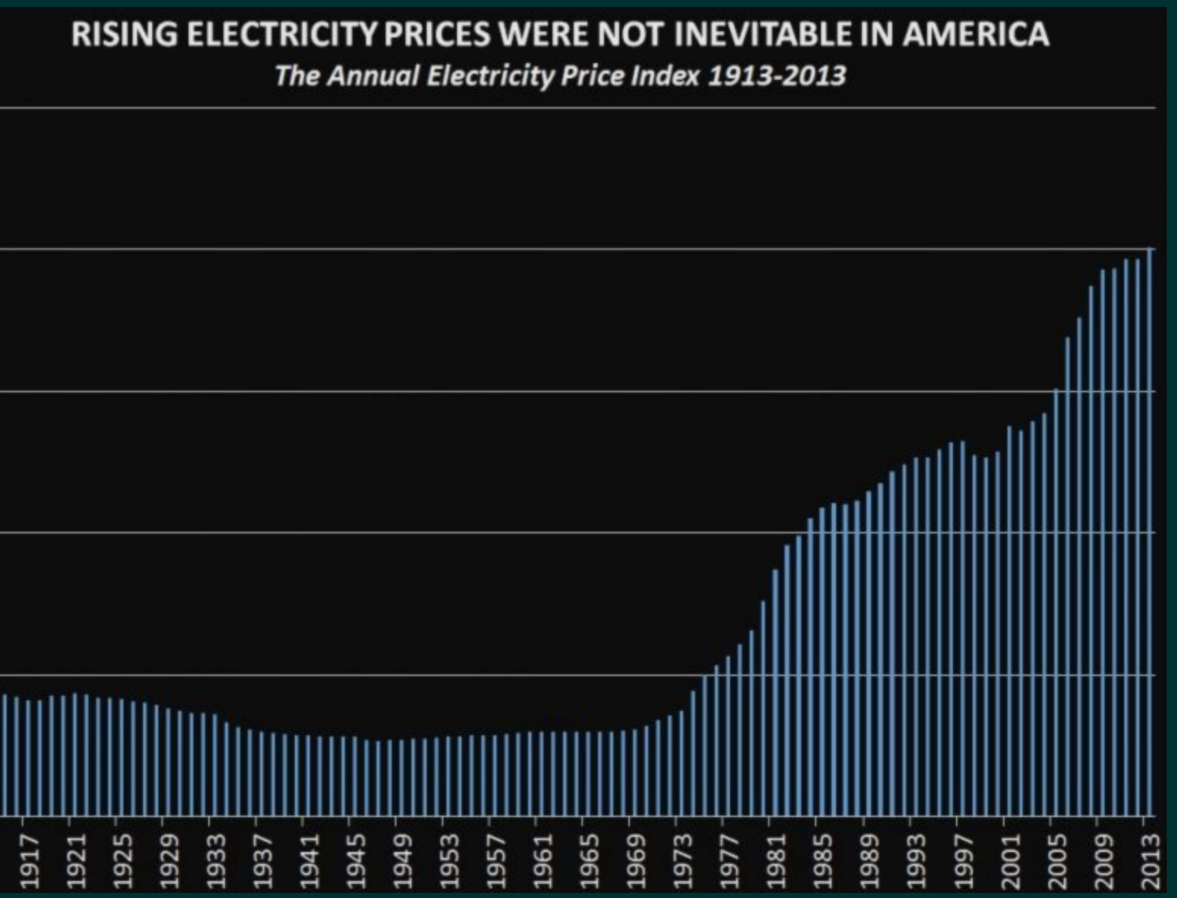
Are you Aware?

8 out of 10 Dollars for a Modern ICE Vehicle **REJECTED** out the Radiator !

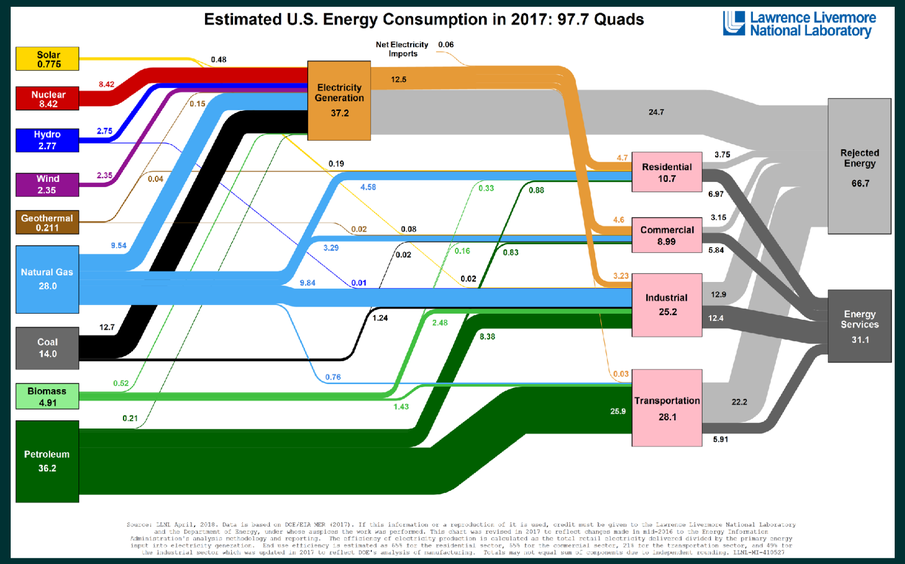
Concentrated Liquid hydrocarbon Sunshine gone forever



Every phantom kW costs $20,000 +/- $5000 over the Next Decade



LOOK AROUND



66.7% Energy REJECTED

SunFarm ENERGY

THINK ABOUT IT

GO THOUSANDS miles/week "Burning" Sunshine harvested from a single Rooftop PV System

What is the Temperature in your Attic at 3pm on a Sunny day?

?

Does your Antiquated Single speed AC burn dollars to prevent excessive Wet Bulb Temperature

?

Do you have Ductwork outside the conditioned envelope?

As Humidity climbs above 60% a House becomes unhealthy due Reproducing Mold cascade.

Ductwork issues must be corrected or removed for a healthy house.

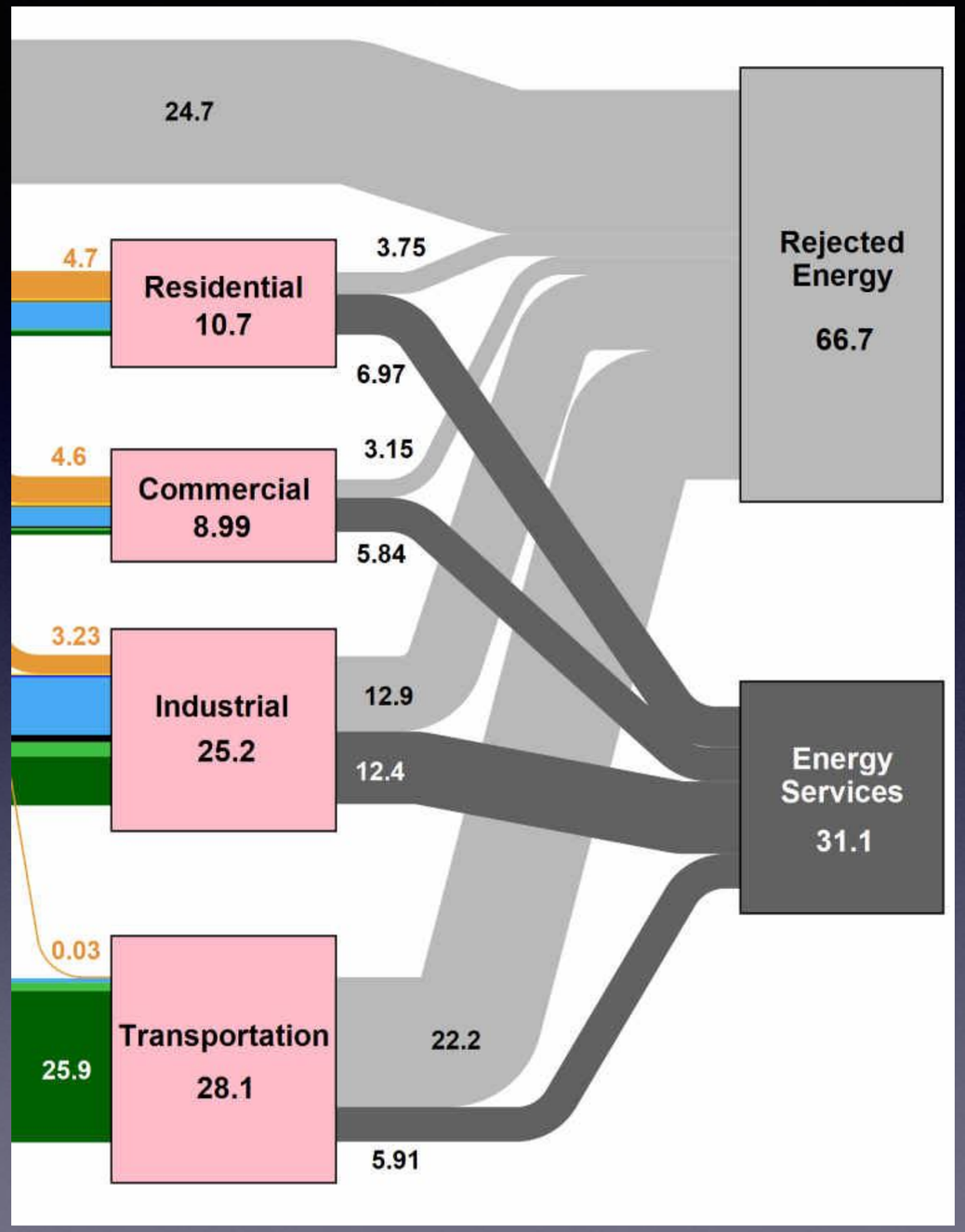
Can you stay in you house after a power failure in the Summer?

A PV System improves livability in so many ways

Often >50% of Energy burn to maintain a healthy space in the Southeast USA is REJECTED.

SunFarm Energy

can help Plan and Execute a Sustainable Path Forward.



Don’t Let the Sun Go Down

Choose Wisely

Don’t Let the Sun Go Down

Failing to Plan is

Planing to Fail

Embrace the future

SunFarm Energy has the solution
to secure Prosperity with secure Energy

Who you going to

Call for

SECURITY & CERTAINTY
in Energy

The Awesome Powerful

Sunfarm Energy Team