



The Premier Energy Training Workshop
and Trade Show for Federal Agencies

A River of Energy Solutions

Using the Gestalt Principal in Understanding Sustainability

The Honorable William C. "Bill" Anderson
Former Assistant Secretary – U. S. Air Force

Do You Have the Right Mindset to Really Think Sustainability?

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“What You People Call Your Natural Resources Our People Call Our Relatives”

Oren Lyons, Faith Keeper of the Onondaga

Let's Start with a Healthy Dose of Reality...

Wishful Thinking...

Cloaking the Monumental Task Ahead

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“The Days of Fossil Fuel are Over”

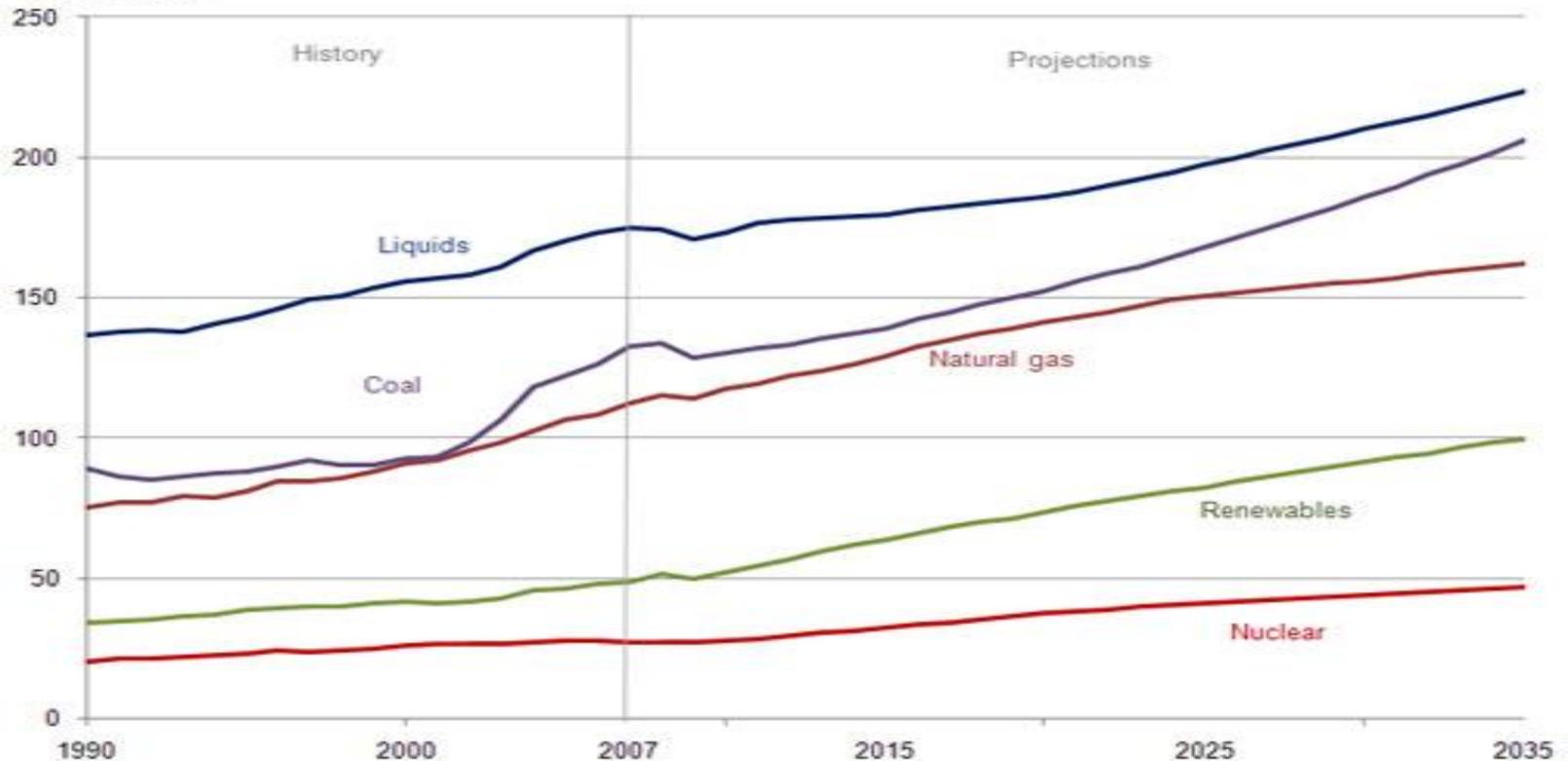
Ted Turner
NBC’s “Meet the Press”
November 30, 2008

The Annoying Reality...

Fossil Fuel Use Increases Over the Foreseeable Horizon

Figure 16. World marketed energy use by fuel type, 1990-2035

quadrillion Btu



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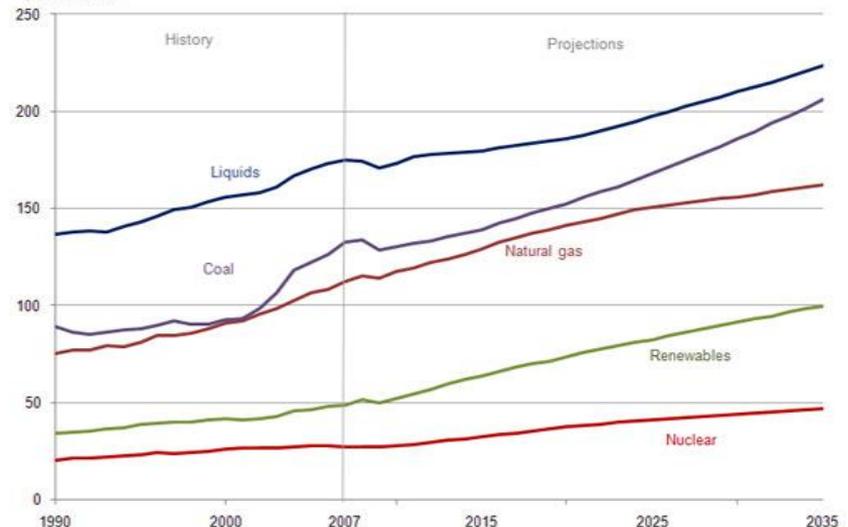
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To meet UN 2020 emissions targets, increases over the next 10 years must be less than the single year rise from 2009-2010...and the global recovery is coming

Global Energy Picture

- Demand for fossil fuels will continue to increase for the foreseeable future ...no real alternatives to petroleum-based liquid transportation fuels
- 2 billion people lack access to modern forms of energy. Drive to provide universal energy access... socially just...exacerbates problem
- Rationing of energy becomes a real possibility ...source of tension/conflict
- If there is no such thing as “clean coal” we are all big trouble
- Unless we see a radical change in how we deal with manmade CO₂...no net reduction in GHG emissions over the foreseeable horizon

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quadrillion Btu



No Nation can Solve Alone...
Requires International
Cooperation on Scale Never
Seen Before

And What is Sustainability... Really

What is Sustainability?

Sustainability

Environmental

- Land Use
- Water
- Atmosphere
- Energy
- Food
- Materials
- Transportation
- Waste

Economic

- Sustained Yield
 - Welfare
 - Resources
 - Profit Margin
- Economic Justice
- “Natural Capital”

Social

- Human Rights
- Labor Rights
- Governance
- Quality of Life
- Equity
- Diversity

Are We Focusing on Life Cycle?

Why is Life Cycle So Important?

In the Natural World...

Waste Equals Food

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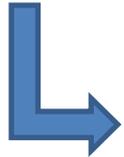
Waste Equals Food

In the Industrial World...

Waste Equals Waste

Traditional Industrial Life Cycle

Exploration/
Cultivation



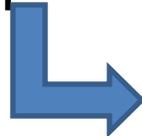
Extraction/
Harvest



Processing



Transportation



Use



End of Life Solution

**If We Continue to Treat Waste as
Waste, We Will Never Reach
Sustainability**

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**The Big Breakthrough in
Mindset...**

**CO₂ as Food/Fuel...Never Again
Seen as Waste**

Failure to Focus on Life Cycle...

Where Has it Gotten Us?

CFLs
Contain
Neurotoxins

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Wind Turbines
Require 8X the
Material of a
Gas Turbine to
Generate the
Same Power

CFLs
Contain
Neurotoxins

Wind Turbines
Require 8X the
Material of a
Gas Turbine to
Generate the
Same Amount of
Power

Rain Forests
Destroyed to
Grow Palm
Oil for Biofuel
Production

CFLC
Contaminants
Neurotoxic

Ethanol
Production
Diverts Crop Land
from Food
Production...Net
Energy Balance
Questionable...
CO2 Footprint
Unacceptable

Require 8X the
Wind Turbines

CFL

High concentrations of CO₂ in Water is not Perrier...its Lethal

anol

ction

Land

Net

able...

Footprint

Unacceptable

Wind Turbines require 8X the

America's Best New
Technology... e.g.
Bill Gate's
TerraPower... Going
Overseas. U.S.
Regulatory Structure
Can Not Keep Up
with Development
Timelines

and

let

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Wind Turbines
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Supporting the Sustainable Mission

Sustainability to Enhance the Mission

- Build a “Roadmap to Net Zero” that Embraces Operational Reality and Financial Constraints
 - Sustainability to enhance the mission not burden operational team...will not succeed any other way
 - Multi-generational approach...actions support holistic solution...building blocks to desired state
- “Check the Box” Sustainability is not Sustainable in Itself
 - Vital resources squandered...success limited
 - Fed Govt leaders have opportunity to drive real change

Establishing Conditions for Success

- Can the Federal Government Learn to be a Good/Tough Customer?
 - Who's Driving the Bus Anyway?
- Are Vendors Providing Offerings that Address Mandates at Optimum Cost to the Taxpayer?
 - Buyouts of ESCO Contracts
- Where is the Next Great Idea?
 - Innovation Will Come from Garage Inventors and College Campuses...Visible to You, or Filtered by the Bureaucracy?

Questions?

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