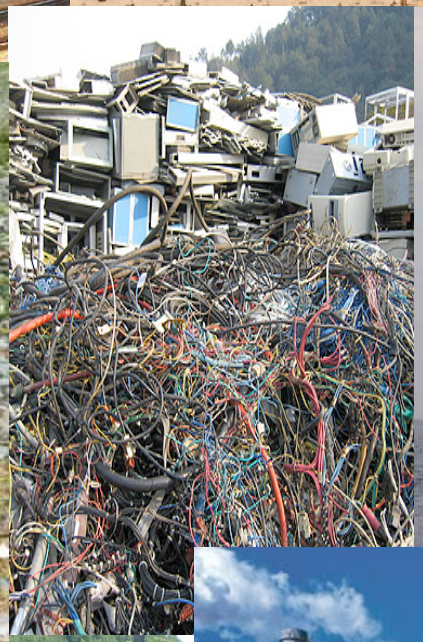
“I have been impressed with the urgency of doing. Knowing is not enough: we must apply. Being willing is not enough: we must do.”

Leonardo da Vinci



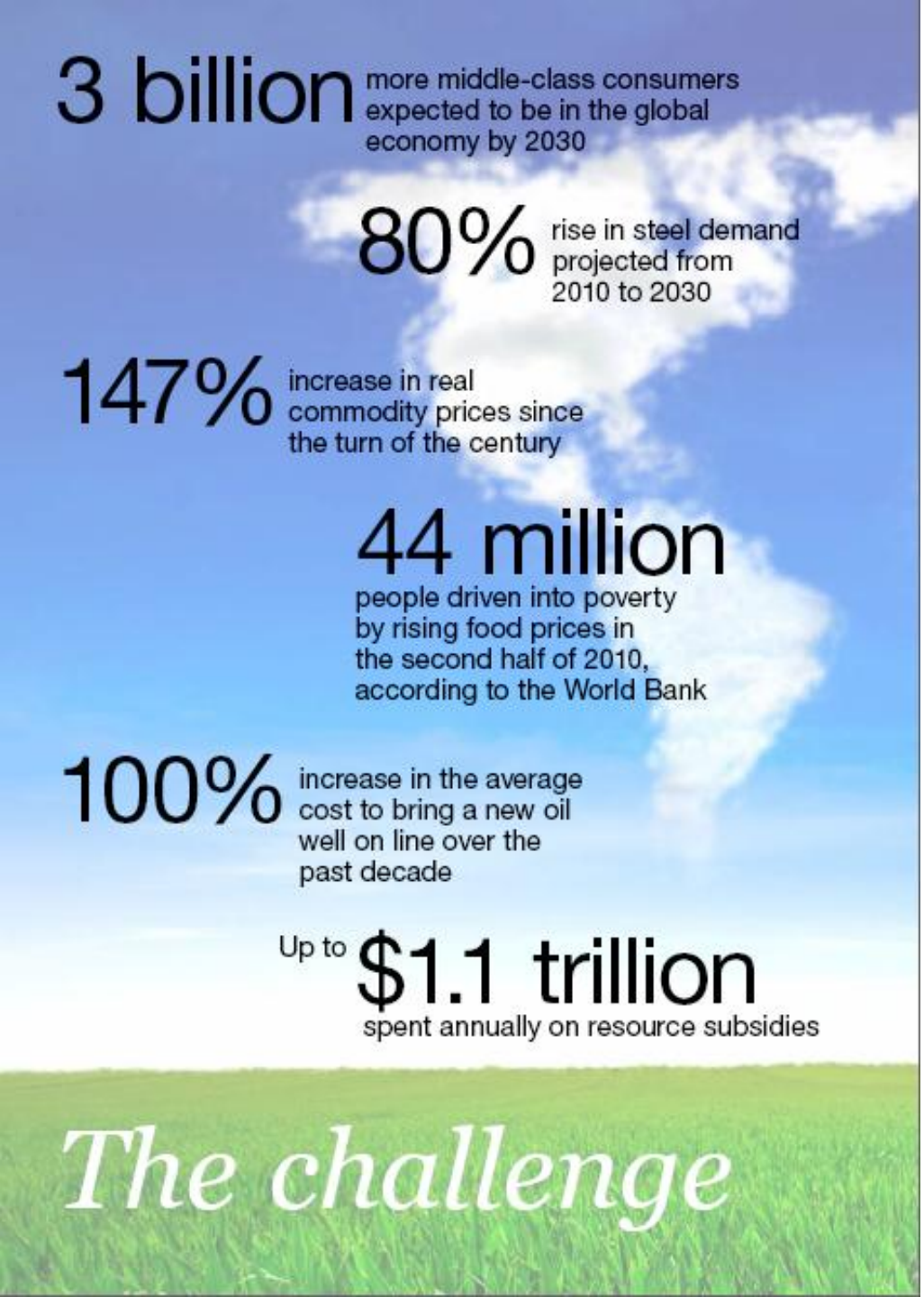








Second Nature
Education for Sustainability



McKinsey Global Institute reports on…

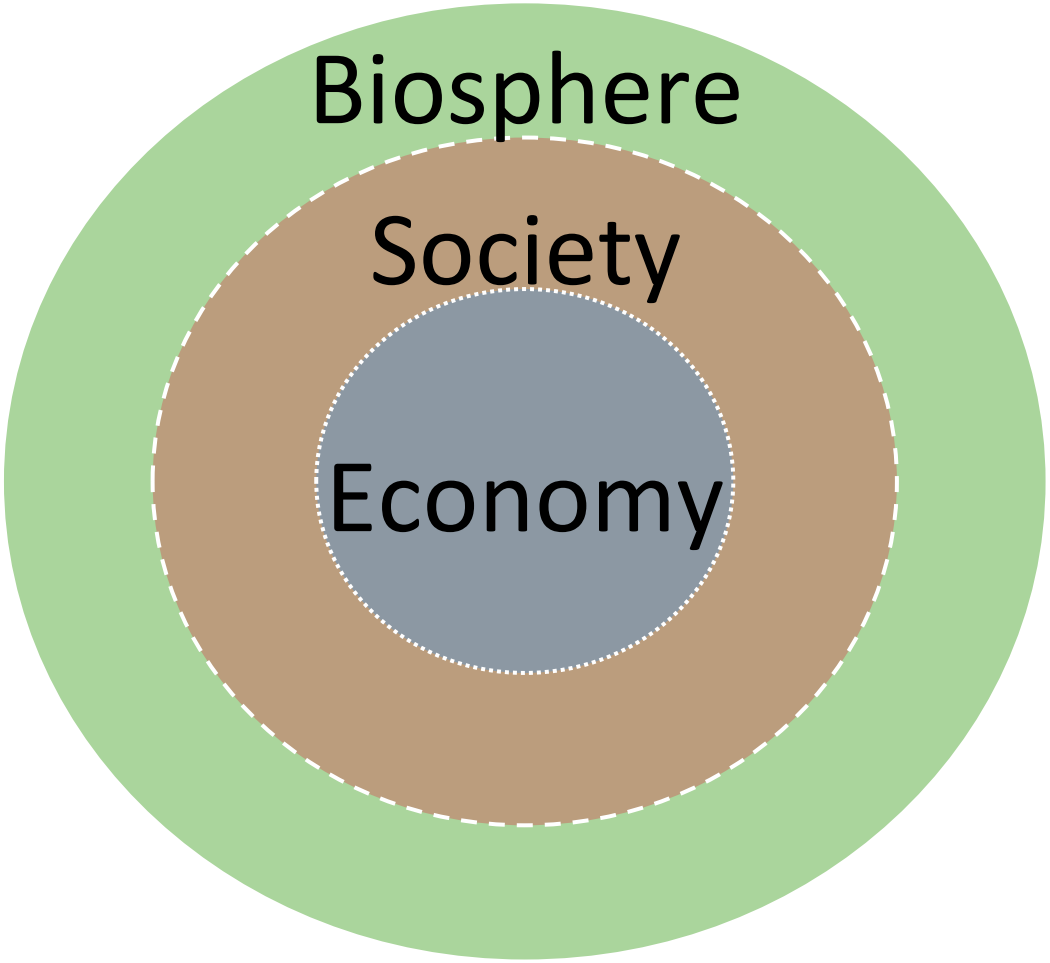
of a lifetime

And our world's greatest *opportunity*

The Big Question

How do we create a decent quality of life for all current and future humans on a planet whose capacity to support life is precarious?

Physical Reality



Climate Crisis Math

2 degrees C

Limit: **565** gigatons

Proven FF reserves: **2765** gigatons

How did we get here?

Humans dominant and separate from nature

Earth: infinite giver

Linear thinking

Increased consumption = success

SYSTEMS DESIGN FAILURE!

Please consider the environment before printing this email.

Environmental Footprint of Printing

extraction

chemical mfg

transportation

fabrication

assembly

packaging

energy

paper mfg

chemical mfg

logging

Making the *"invisible"* ***"visible"***

- Systemic life cycle impacts
- True cost pricing & accounting
- Better measures of well-being
- Timely ecological and social signals

A New Human Story?

Sufficiency: Needs over wants

Community

Cooperation and collaboration

Caring for all life: golden rule

Sustainable economy

A Change in Mindset

Problem Solving to **Creating**

Flourishing and Sustainable Human Society

Circular Production

Energy Efficiency & Renewable Energy

Nature's Interest

Circular Production

Energy Efficiency
& Renewable Energy

Nature's Interest

Circular Production

Energy Efficiency
& Renewable Energy

Nature's Interest

Transforming Higher Education

- Content of learning
- Context of learning
- Process of learning
- Institutional Practice of Sustainability
- Partnerships with Local & Regional Communities

AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

The American College & University Presidents' Climate Commitment (ACUPCC)

Climate Leadership in Higher Education

AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

The ACUPCC Initiative

- Led by presidents & chancellors
- 665 + institutions
- 50 States & one-third of student population
- Action plan for climate neutrality
- Research & education
- Public accountability

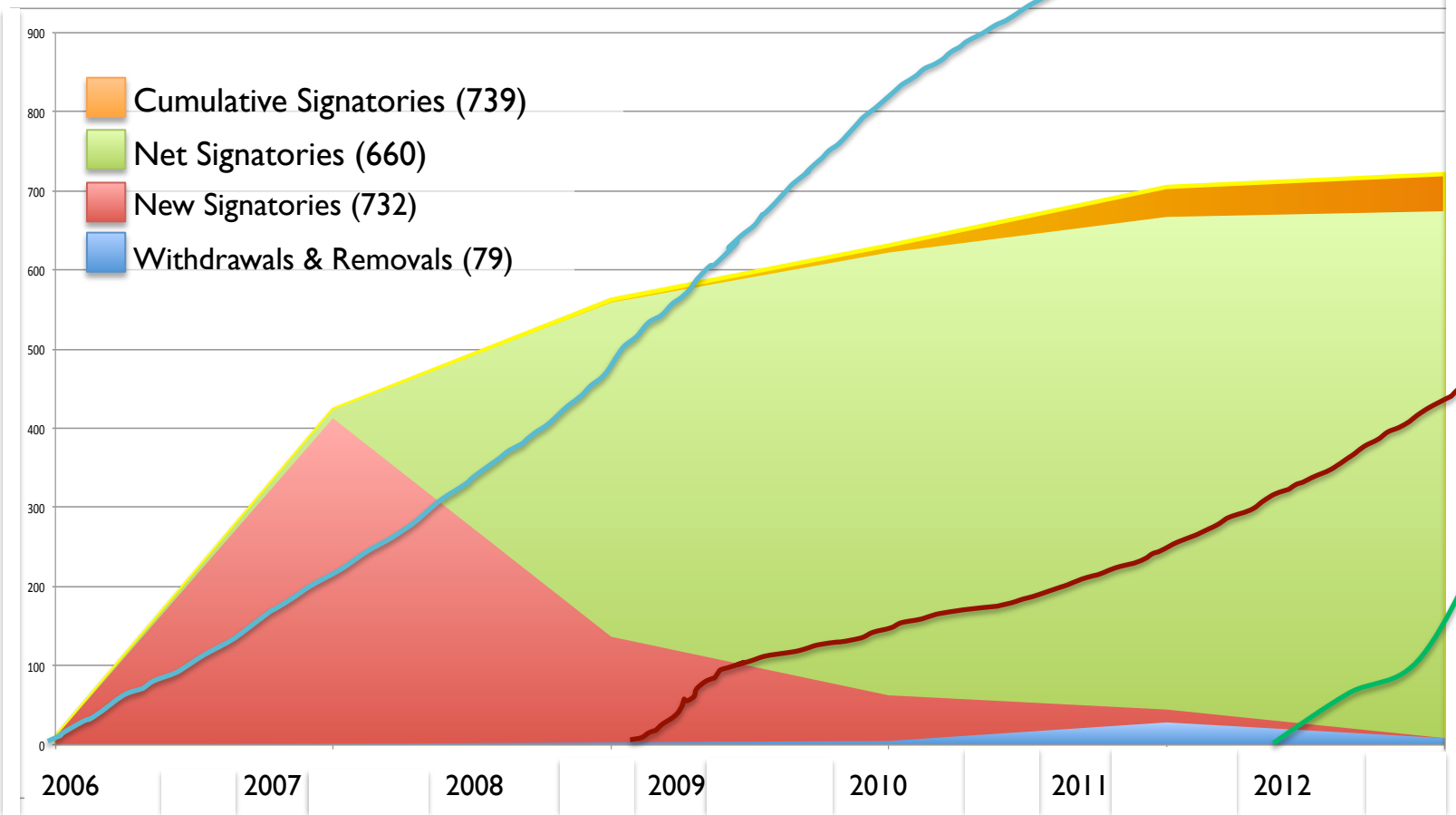
American College & University
Presidents Climate Commitment

NC ACUPCC Signatories

Appalachian State University
Blue Ridge Community College
Carteret Community College
Catawba College
Central Carolina Community College
Davidson College
Duke University
Durham Technical Community College
Elizabeth City State University
Fayetteville State University
Guilford College
Haywood Community College
North Carolina Central University
North Carolina Community College District
North Carolina State University
Queens University of Charlotte
Southeastern Community College
University of North Carolina at Chapel Hill
University of North Carolina at Charlotte
University of North Carolina at Greensboro
Wake Technical Community College
Warren Wilson College
Wilson Community College

The Sequence of Success

Total Signatories Annually



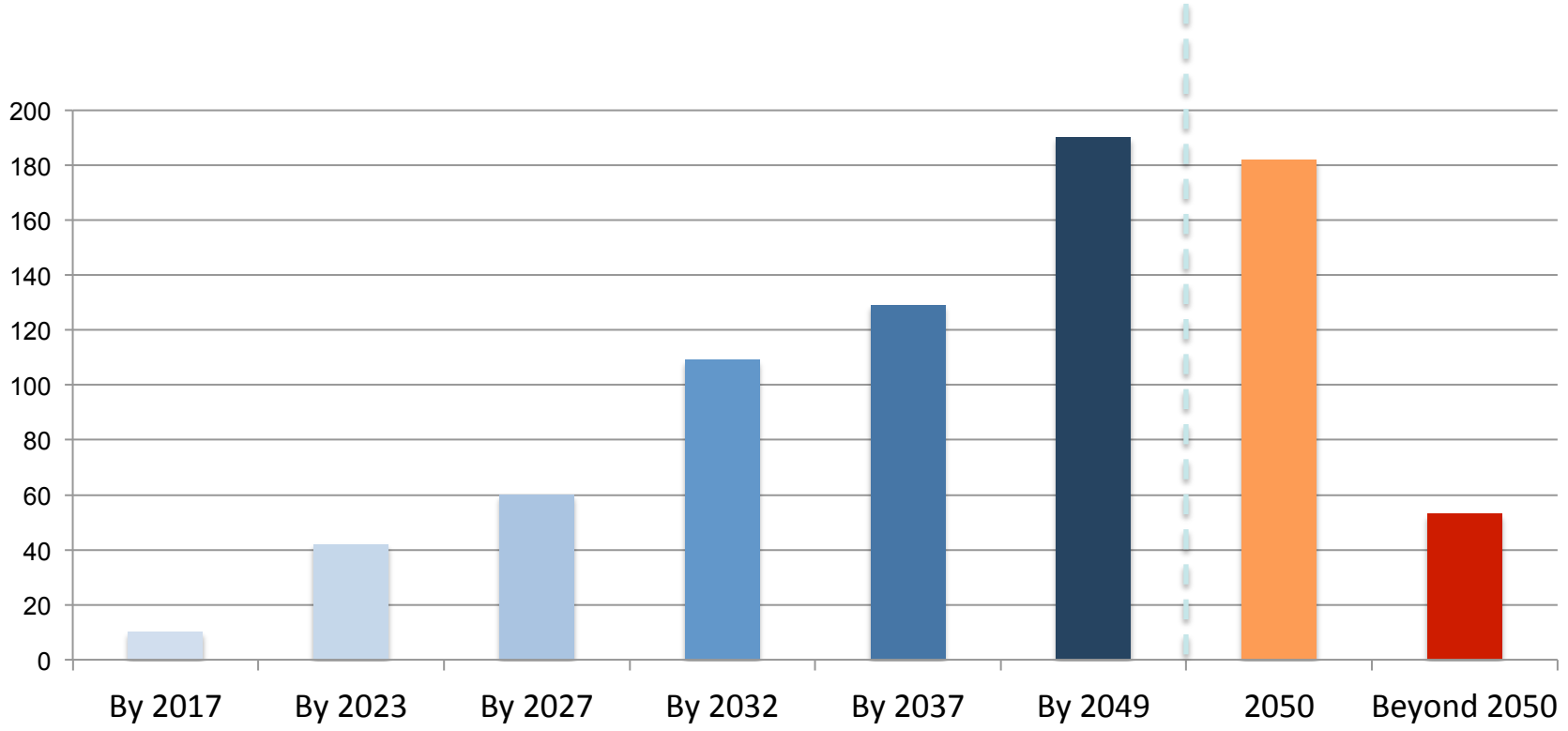
1807
GHG Inventories Submitted

Climate Action Plans (CAPs) Submitted
494

300
Progress Reports on CAPs

American College & University
Presidents Climate Commitment

Climate Neutrality Target Dates



Summary of Progress

Financial Savings

- **69%** of signatories report CAP implementation has saved money.

  208 institutions saved total of **$139 Million**

- Funding Secured from Outside Sources

  136 signatories secured funding totaling **$304,290,148**

Green Revolving Funds

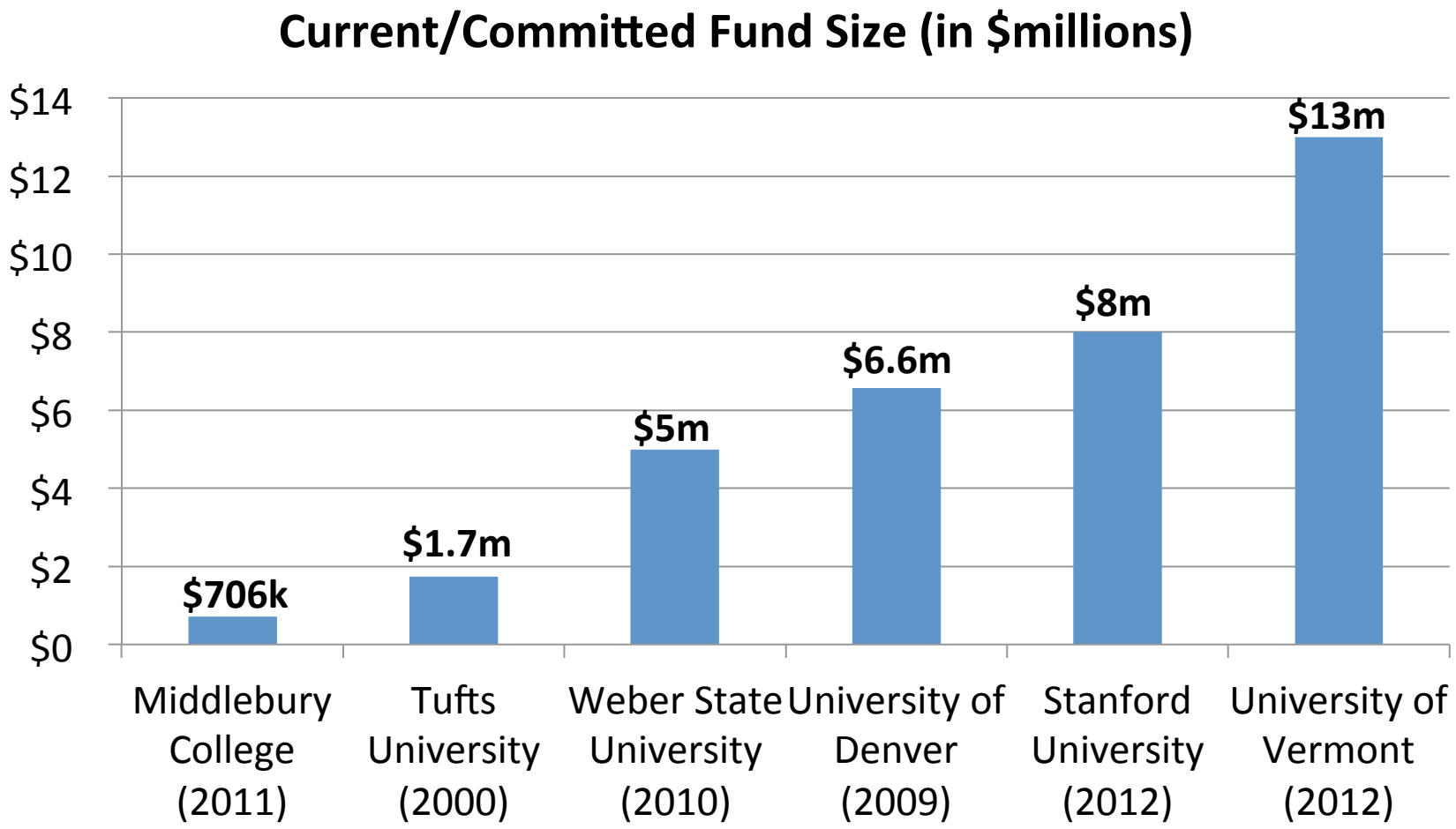
76 institutions

$111 million in capital

Ave annual return = **28%**

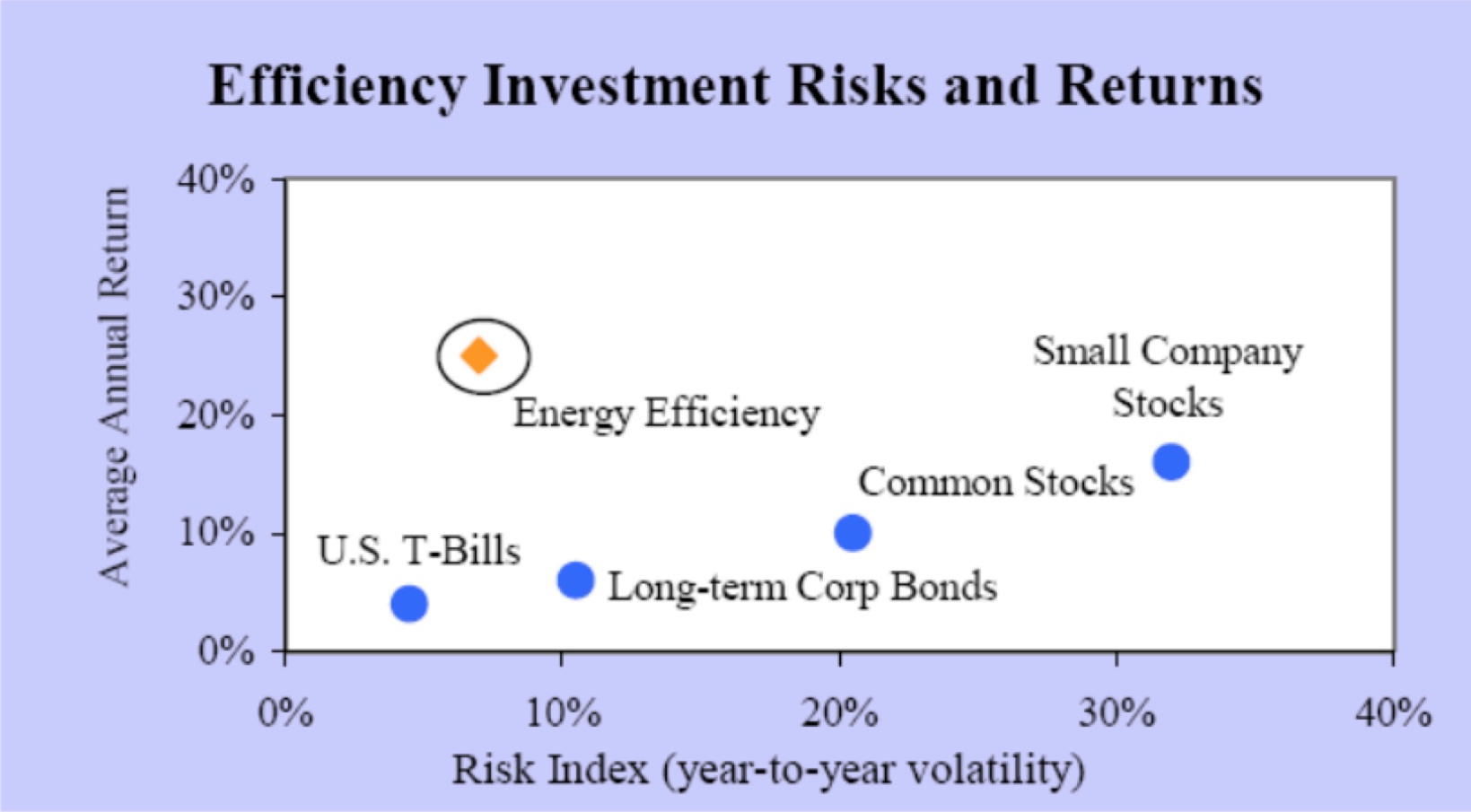
http://greenbillion.org/

Billion Dollar Challenge: Green Revolving Funds



From: Sustainable Endowments Institute, *Greening the Bottom Line 2012*

Energy Efficiency is the Best Investment



Source: Adapted by ACEEE from the EPA and the Vanguard Group (see Laitner 2008)

Reduce 80,000
tons / year

Save $2,000,000
per year

Total Reduction
80,000 tons / year

Total Savings $2,000,000
per year

Second Nature
Education for Sustainability

Produce 6.5 million
kwh / year

Save $4 million
per year

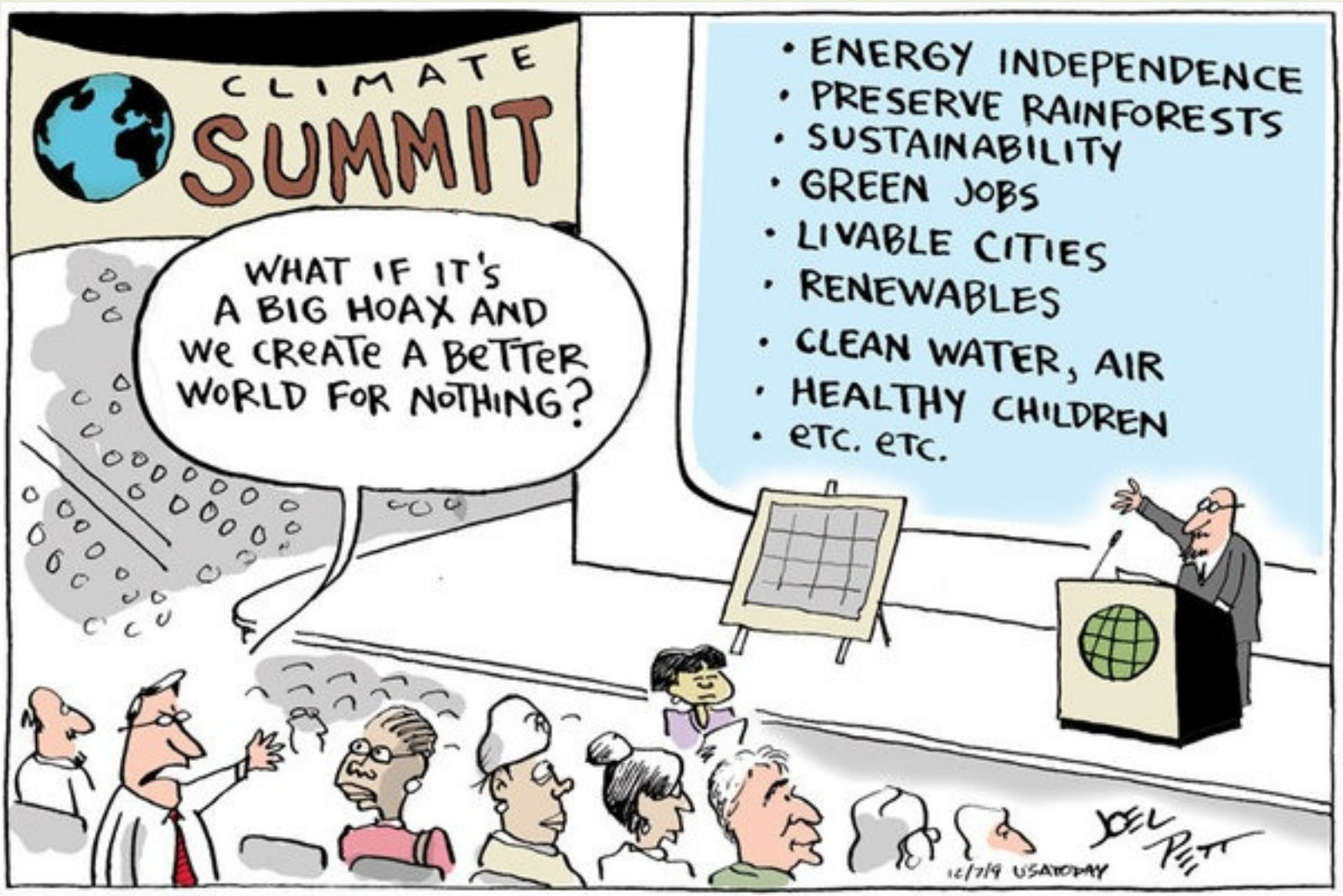
First Institution to Become Grid Positive

Total Savings $50-75 Million over next 15 years

Second Nature
Education for Sustainability

Institutionalizing Sustainability

- Integral to University Mission
- Integral to Academic and Campus Master Plan
- Sustainability Policies and Measurement
- Rewards, Incentives & Staff Development
- Development Priority/Alumni Tracking
- Communications & Marketing
- Collaboration with Other Sectors


CLIMATE
SUMMIT
WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?
• ENERGY INDEPENDENCE
• PRESERVE RAINFORESTS
• SUSTAINABILITY
• GREEN JOBS
• LIVABLE CITIES
• RENEWABLES
• CLEAN WATER, AIR
• HEALTHY CHILDREN
• ETC. ETC.
12/7/19 USATODAY
JOEL PETT