

NC Climate Protection Program RDD&D

Koshland Earth Lab II

+

Sustain NC



Grant Millin, Owner and Innovation Strategist

InnovoGraph LLC

Management Consulting – Strategic Innovation Services

InnoGraph

- **InnoGraph is a management consulting firm specializing in strategic innovation.** A strategic innovation challenge is how to move a state like North Carolina forward on its EPA Clean Power Plan. Sustain NC is an InnoGraph initiative.

An additional challenge is fostering community willingness to adopt fuel cells and hydrogen infrastructure given the limited awareness of these technologies here, despite new evidence of success like the Maiden, NC Apple data center CleanTech power system.

- **InnoGraph supports strategists with value-amplifying strategy, innovation, and design capabilities.**

Sustain NC Strategy Questions

How best can North Carolina and national strategic stakeholders support opportunities to improve cities and towns in our state, and beyond our borders – in terms of basic quality of life... including social services, infrastructure, and macro sustainability – for **all citizens sufficient well-being**?

What is sufficiency at 2016?

1. Who must support, define, and deploy the relevant, **evidence-based strategy**?
2. What are the opportunity costs of inaction?
3. How can we guarantee a more inclusive system?
4. When does victory happen... and **how distant is the threshold**?

Sustain NC

(Active)

Sustain NC Partners

Smart Grid DEEP

(Active)

Smart Cities & Towns

(TBA)

NC Climate Protection Program

(TBA)

NC Clean Power Plan

(TBA)

Megawatts of Change

(TBA)

© InnovoGraph

About Sustain NC

North Carolina management consulting firm InnovoGraph is launching Sustain NC – a community innovation group defining and tracking regional sustainability progress through research and strategy. Sustain NC acts on sustainability innovation as a professional development group generating service projects with statewide, national, and/or global impact. The initial Sustain NC service project is the development of the NC Clean Power Plan. Sustain Western NC, Sustain Central NC, and Sustain Eastern NC will connect the state level. Each North Carolina community can be involved.

<http://sustainnc.com/about/>

Why Sustainability Innovation?

Sustainability-oriented innovation addressing climate change and human opportunity adds critical value to state economies. Sustain NC reforms our innovation assumptions, adding to North Carolina's past community welfare record and other trend-setting strategic innovation examples our state has produced, like the NC Progress Board and more recently *Federal Partnership for Sustainable Communities* initiatives like GroWNC.

Anthropogenic Climate Confusion among U.S. teachers

Q: **What proportion of scientists know global warming is anthropogenic?**

- Only 30% of middle-school and 45% of high-school science teachers say 81 to 100%. **F**
- Only 52% teachers who understand anthropogenic climate change, also know the overwhelming science consensus also supports human causes. **F**

Trying to ‘teach both sides’ by conveying to students that there is legitimate scientific debate instead of **deep consensus is not supported.**



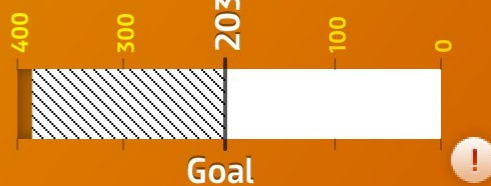
Koshland Science Museum

CO2 Mitigation Decision Wall

- **Only two sites: Washington DC & Raleigh, NC**
- Raleigh site especially may be underutilized
- Both exhibits ready for upgrade. **Mobility** a potential new value arena.
- More promotion and education around this relatively complex interactive technology needed.
- Original messages of understanding ‘portfolio of mitigation strategies’, ‘stabilization of GHG concentrations’, and ‘sacrifice’ needs update per current science and national strategy.

GOAL

203 Gt



CURRENT

386 Gt

START OVER

VISUALIZE

Prioritize

You can re-weight your priorities at any time by re-distributing the discs among the slots.

Importance to You

Result of Your Strategies

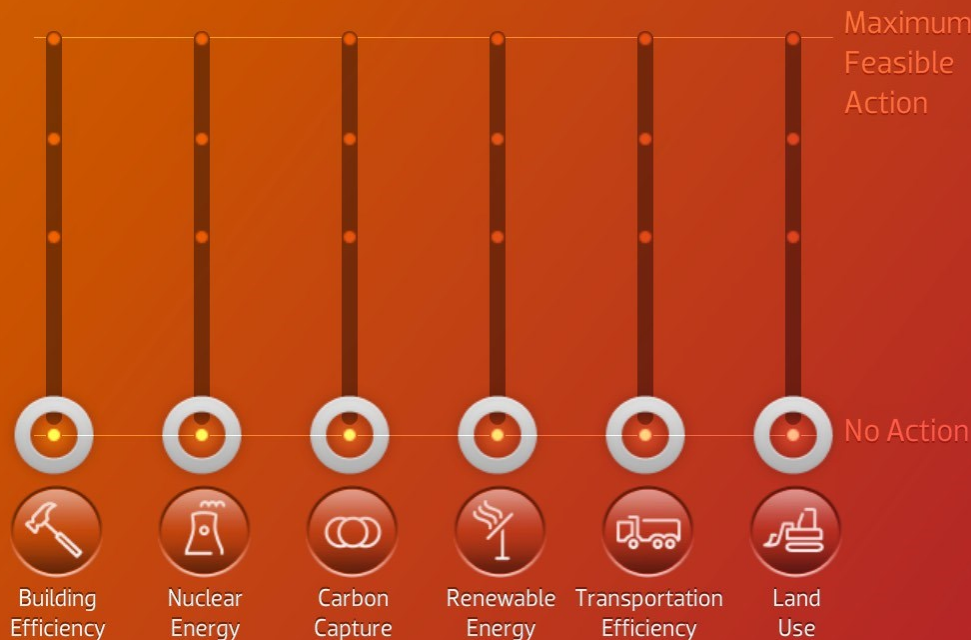


More



Mitigate

Assemble a strategy portfolio. Use the sliders to implement U.S. mitigation efforts. Watch the priority slots' shading to ensure your choices safeguard your priorities.



Compare your portfolio with example solutions.

Compare

Source: Koshland Science Museum

Koshland Earth Lab II Future State

RDD&D Phase 1

- Increase public engagement around current DC & Raleigh exhibits (KEL I).

RDD&D Phase 2 - KEL II

- Update data
- Display Federal, academia, CleanTech business, and community solutions.
- Exhibit technology upgrades, i.e. **Go Mobile!**

**RDD&D = Research, Development (or Design),
Demonstration, and Deployment (IPCC/DOE)**

Follow-up questions

- What is the level of climate confusion among US public, private, and nonprofit leaders?
- Policy, public health staff, etc.?
- Level of confusion about anthropogenic climate strategy beyond mass investment in renewables, ‘general efficiency’, and large batteries, a.k.a. so-called “energy storage”?

NC Climate Protection Program is about economic development strategy (EDS) too

According to the International Energy Agency, \$44 T in CleanTech investments to 2050 will yield \$115 T in energy savings alone. Each year of delayed action increases costs.

Aspire

Choose

Discover

Evolve

Extend

Scale

Accelerate

Mobilize

The Eight Essentials of Innovation, McKinsey & Co.

Also see InnovoGraph's **Open Strategic Innovation for Communities** (OSIC): <http://www.innovograph.com/projects/osic/>

Let's start today



Your Sustain NC contact:

Grant Millin, Innovation Strategist and Owner
Sustain NC / InnovoGraph LLC

PO Box 9446

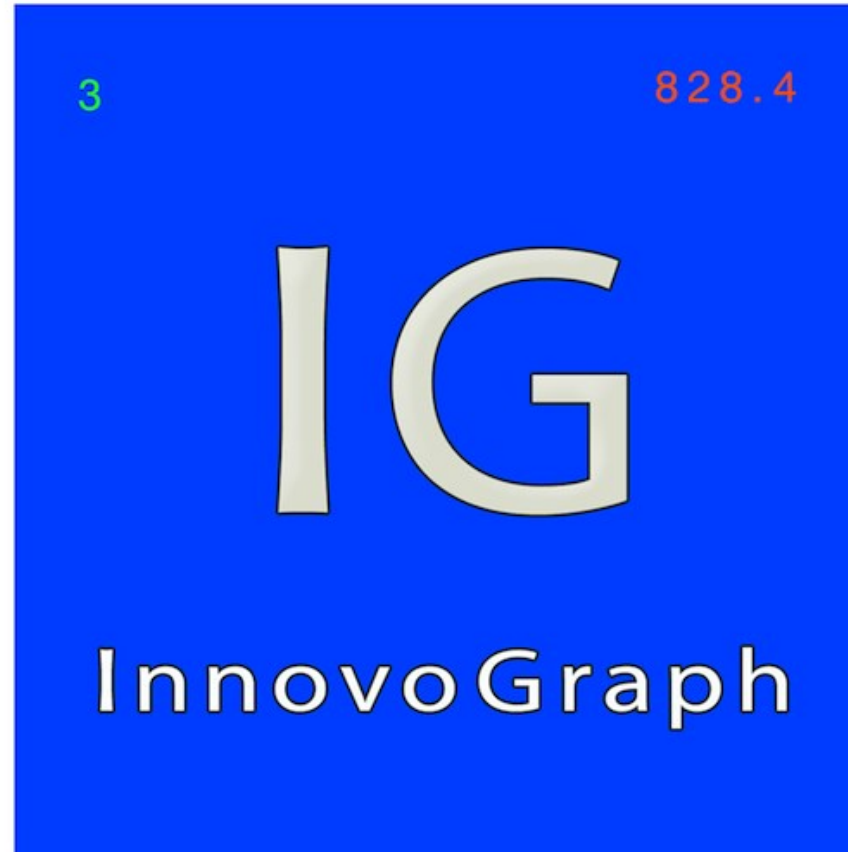
Asheville, NC 28815

Cell: 828.423.2266 /Office: 828.298.5706

Email/URL: grant@innovograph.com

About Sustain NC: <http://sustainnc.com/about/>

RESEARCH - DISCOVERY - DESIGN



**STRATEGIC INNOVATION SERVICES
MANAGEMENT CONSULTING**