Political Calculus: The Role of Science in Energy and Climate Policy

Ana Unruh Cohen, PhD
Select Committee on Energy Independence and Global Warming
Eddy Symposium
October 24, 2010
Recommend policies that:

1) Reduce global warming pollution
2) Reduce oil imports
3) Create new jobs and industries
Important Events of 2007

- Democrats regain majorities in House and Senate
  - Climate Change no longer forbidden topic
- IPCC 4th Assessment
  - “Warming of the climate system is unequivocal…”
  - “Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.”
- Supreme Court ruling in Massachusetts vs. EPA
  - EPA may regulate CO2 as an air pollutant under
Expanding Coalition

- Religious – “creation care”, concern for impacts on poor
- Military – climate change a “threat multiplier”
- Farmers – for renewable energy, not really climate
## Legislative Achievements

- **2007 Energy Bill**
  - First increase in fuel economy for 30 years
  - Renewable Fuel Standard with CO2 metrics
  - Written by Democratic Congress, signed by President Bush

- **2009 Recovery Act**
  - $90 billion in clean energy investments
  - $31 billion for science

- **2009 House passes Waxman–Markey**
  - Comprehensive energy and climate bill
  - Economy back from the brink but still fragile

- **2010 Defeat of Murkowski Resolution to curtail EPA**
  - (53–47)
Roadblocks to Legislation

- “Climategate” and IPCC “mistakes”
- “Snowmageddon” – record snowfall
- Recovering economy, high unemployment
- BP oil spill
- Senate gridlock
Why do doubts on basic climate science remain?

Ten Indicators of a Warming World

- Air Temperature Near Surface (Troposphere)
- Humidity
- Temperature Over Oceans
- Sea Surface Temperature
- Sea Ice
- Sea Level
- Ocean Heat Content
- Temperature Over Land
- Glaciers
- Snow Cover

NOAA, 2009 State of the Climate
Asymmetric Media Coverage

- Accusations in mass media, rebuttal in scientific media
- 200+ Members of the National Academy of Sciences letter on “Climate Change and the Integrity of Science”
- Finally published in Science (May 7, 2010, vol 328, pg 689)
Understanding the American Public

- Americans fall into 6 groups (Anthony Leiserowitz, Yale, Jan ‘10)
  - Alarmed – 10%
  - Concerned – 29%
  - Cautious – 27%
  - Disengaged – 6%
  - Doubtful – 13%
  - Dismissive – 16% (Up from 7% in 2008)

- Americans’ Knowledge of Climate Change (Yale, Oct 2010)
  - Bad news: Even among the 63% percent that believe global warming is happening, many do not understand why; 38% believe there is disagreement among scientists that global warming is real
  - Good news: Understand that burning fossil fuels
Understanding the American Public

• 2009 Pew and AAAS survey
  • Public has positive views of the scientific community
  • Scientists tend to consider the public ignorant and the media irresponsible

• Complexity of subject and/or information imperfectly disseminated does not explain public reaction to scientific consensus

“Politics Trumps Substance”

“Political leaders will always seek to use science to further their own ends.”

Editorial, Nature 443, 724 (19 October 2006)

In this regard, science is a victim of its own success.
Fig. 1. Changes in key global climate parameters since 1973, compared with the scenarios of the IPCC (shown as dashed lines and gray ranges)

S. Rahmstorf et al., Science 316, 709 (2007)
Positive proof of global warming.
### Contrasts between Scientist and Policy Makers

<table>
<thead>
<tr>
<th></th>
<th>Scientists</th>
<th>Policy Makers</th>
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<tr>
<td><strong>Primary Goal</strong></td>
<td>Seek truth</td>
<td>Advance public welfare</td>
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<tr>
<td><strong>Time demand of system</strong></td>
<td>Long; incremental</td>
<td>Short; must decide/act now</td>
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<tr>
<td><strong>Rewarded for</strong></td>
<td>Experimenting</td>
<td>Being right; punished for mistakes</td>
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The Policy Method

- Identify issue
  - Colleagues, staff, constituents, VIPs, advocates, lobbyists
  - Media (all types), science
  - Events, especially catastrophes
THE SCIENCE NEWS CYCLE

Start Here

Your Research
Conclusion: A is correlated with B (p=0.56), given C, assuming D and under E conditions.

...is translated by...

University PR Office
(YES, YOU HAVE ONE)

For Immediate Release: Scientists find potential link between A and B (under certain conditions).

...which is then picked up by...

News Wire Organizations

A causes B, say Scientists.

The Internets

Scientists out to kill us again.
POSTED BY RANDOM DUDE
Comments (377)
OMG! I knew it!!!
WTH??????

Local Eyewitness News

What you don't know about "A" can kill you! More at 11.

...and caught on...

Cable News

We saw it on a blog!
A causes B all the time
What will this mean for Obama?

...then noticed by...

The Internets
The Policy Method

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- Identify possible solutions
  - Science and technology, economics, values, politics
"We have to determine what the global need is and figure out how to distribute it - a calculation that must combine science with justice."

Colin Challen, (now former) British MP, on setting greenhouse gas reduction targets

The Policy Method

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- Evaluate impact on stakeholders

- Propose policy or legislation
  - Build support

- Oversight
  - Economics, science, politics
Select Committee Response to “Climategate”

- Rep. Markey in media
- Staff report on Temperature Reconstructions
- Hearings
  - “State of Climate Science” with Holdren and Lubchenco (December 2, 2009)
  - “Foundation of Climate Science” with McCarthy, Hurrell, Fields, Graumlich, Monckton (May 6, 2010)
  - “Climate Science in the Political Arena” with Cicerone, Molina, Santer, Schneider, Happer (May 20, 2010)
On global warming, the science is solid
March 6, 2010

“While aspects of climate change impacts have been overstated, none of the errors or allegations of misbehavior undermine the science behind any of the statements made above. In particular, they do not alter the conclusions that humans have taken over from nature as the dominant influence on our climate.”

This article was submitted by Andrew Dessler, professor of atmospheric sciences, Texas A&M University; Katharine Hayhoe, research associate professor of atmospheric sciences, Texas Tech University; Charles Jackson, research scientist, Institute for Geophysics, The University of Texas at Austin; Gerald North, distinguished professor of atmospheric sciences, Texas A&M University; André Droxler, professor of earth science and director of the Center for the Study of Environment and Society, Rice
Scientists’ Obligation to Society

- Nature editorial (March 2010): “Scientists must now emphasize the science, while acknowledging that they are in a street fight, and that their relationship with the media really matters.”

- Remember that scientists are not the best messenger for some groups; need to develop partnerships with non-scientists

- Communication must be clear – lead with what you know

- Be ready to answer typical questions, rebut typical objections
What’s at Stake

- “If you aren’t at the table, you are on the menu”

- VA Attorney General Cuccinelli fraud investigation, potential congressional investigations

- Republican candidates questioning of the science

- Additional votes to curtail EPA authority

- Developing issues – adaptation, geoengineering
Suggested Books

- **Science**
  - The Discovery of Global Warming, Spencer Weart
  - Merchants of Doubt, Naomi Oreskes and Eric Conway

- **Politics**
  - Carbon War, Jeremy Leggett
  - The Climate War, Eric Pooley

- **Communication**
  - Unscientific America, Chris Mooney and Sheril Kirshenbaum
  - Am I Making Myself Clear?, Cornelia Dean
  - Don’t Be Such a Scientist, Randy Olsen
Favorite Blogs

- Climate Progress
- Real Climate
- Climate Central
- Skeptical Science (smart phone app too!)
- Yale Forum on Climate and the Media
- Gristmill
- Knight Science Tracker
- AAAS Science Now
Get Involved

- Policy divisions of science organizations – everyone
- Internships – undergrad and grad students
- AMS Summer Policy Colloquium – grad students and faculty
- AAAS Science and Technology Fellowships – post-docs and faculty
- The Leopold Leadership Program – faculty
Final Thoughts

- Don’t be afraid to follow the road less travelled
- “Politics trumps substance” so we have to make the science politically relevant
- Scientists’ obligation to society
http://globalwarming.house.gov

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