Science and Technology Policy in the Obama Era

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Overview of This Presentation

- Three major challenges to the Obama Administration
- Implications for science and technology policy
- The future of innovation policy

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Obama's Promise

- President Obama won the most decisive victory in an American presidential election in a quarter of a century.
- He has the luxury of House and Senate majorities in his party, the Democrats
- His public approval ratings are very high for the early part of a presidential term
- He promised to change how things are done in Washington
- The opposition Republican party is in disarray, with no clear national leader, no real alternatives to Obama's policy directions, and a foreboding that they risk being in the minority for the foreseeable future

Obama's Three Big Challenges

- Yes We Can! meets Business as Usual
- Restoring America's place in the world
- Revitalizing the American economy

Yes We Can! vs Business as Usual

- Obama's pragmatic and bi-partisan approach has been met by ideological partisanship
- In addressing national crises he has had to cope with politically partisan "oppositionism"
- Economic urgency vs legislative process delays
- Faith in government vs deep skepticism about it
- Obama's intention to staff quickly is slowed by vetting problems, missteps, and Senatorial "holds"
- Web 2.0 governance vs gov't. info rules, IT security demands, and obsolete IT systems (the saga of Obama's Blackberry)
- No earmarks vs congressional prerogatives

Restoring America's Place in the World

- America has suffered serious losses of moral, political, and economic leadership
- The foreign policy agenda is long and challenging
  - Iraq, Afghanistan, Israel vs Palestine
  - Terrorist activity, torture, closing Guantanamo
  - Pakistan, Sudan, North Korea, Iran
  - Russia, Venezuela, Mexico, Cuba
  - UN, NATO, APEC, WTO, IMF, Geneva Conventions
  - China, India, Japan
  - Etc
  - Etc

Revitalizing the economy

- Short term
  - Credit freeze up, housing crises, bank insolvency
  - Corporate and individual bankruptcies
  - Rising unemployment and extended recession
  - Stock market collapse
  - Venture capital has dried up
- Long term
  - Invest in infrastructure, education, technology
  - Devise a new approach to financial regulation
  - Bring the federal budget closer to balance
  - Reform entitlements (Social Security, Medicare…)
  - Avoid both deflation and inflation

What All This Means for Science and Technology

- New philosophical attitude toward S&T
- Enthusiasm for spending on R&D&T
- First-class S&T appointments
- Immediate action on controversial issues
- Many anticipated or proposed actions
- Some issues are too difficult to tackle now
- A new meaning for the phrase “technology policy”

A New Philosophical Attitude Toward S&T

- Bush Administration
  - Limit Federal role to basic research and mission technologies
  - Disregard for (even hostility toward) science
  - Disaffection from scientists
- Obama Administration
  - Committed to an enlightenment world view
  - Science and expertise are central to achieving public purposes
  - Goal-driven R&D investments
  - Great mutual enthusiasm with scientists

Enthusiasm for Spending on R&D ("It's always about the money")

- Immediate major boost in R&D spending in the "Stimulus Bill"
  - >$20 billion R&D increase (~15%)
  - Probably won't be a permanent increase
  - Comes with many new accountability rules
  - First academic infrastructure funding in years
  - Brief national debate on whether R&D spending creates jobs "now"
- Anticipated modest increases in unfinished FY09 appropriations and in the sketchy FY10 budget

Enthusiasm for Spending on T (It's About Getting Things Done)

- "Smart Grid" for electric power management
- Advanced batteries & other auto technology
- New "ARPA-E" (Advanced Research Projects Agency for Energy)
- Extend broadband to under-served areas
- Health information technology deployment
- Research on effectiveness of preventative health strategies and of medical treatments

First-Class S&T Appointments

- **OSTP**
  - John Holdren, Director [on Hold!]
  - Tom Kalil, Associate Director, Policy
  - Kei Koizumi, Assistant Dir., Federal R&D
  - Shere Abbott, Associate Dir., Environment
- **NEC**
  - Larry Summers, Director (with Tom Kalil)
- **CIO**
  - Vivek Kundra, Chief Information Officer
- **Energy Czar**
  - Carol Browner, Assistant to the President for Energy and Climate Change
- **DOD**
  - Ashton Carter, Undersecretary for Acquisition
- **DOE**
  - Stephen Chu, Secretary
- **DOC**
  - Garry Locke, Secretary
  - Jane Lubchenko, Administrator, NOAA [on Hold!]
- **NSF**
  - Arden Bement stays on as Director
- **NASA and NIH**
  - Michael Griffin and Elias Zerhouni gone / successors not named

Immediate Action on Some Controversial issues

- Ending Yucca Mountain nuclear waste storage project
- Ending ban on federal funding of research using human embryonic stem cells
- Restart “Future Gen” integrated clean coal demonstration facility
- Increase automobile CAFÉ standards
- Enhance protection for endangered species
- Permit California and other states to set greenhouse gas emission standards

Many Anticipated or Proposed Actions

- Climate change (cap and trade, post-Kyoto)
- Nuclear arms control
- Health care reform
- Food safety enhancement
- Earth observing satellite enhancements
- Clean coal and renewable energy research

Many more are in the works

Issues Too Difficult to Tackle Now

- Strategies for focusing national R&D&T efforts on helping the U.S. in a global world
  - Ideas, research, commercial technology
  - Maintaining technology-dominant defense
  - Immigration reform for S&Es
- Reconsideration of nuclear power
- Consider allowing offshore gas and oil operations near the east and/or west coasts
- Humans in space/Space Station/Mars mission
- Re-directing DOE weapons labs to help industry
- Sustaining entrepreneurship and venture capital
- A new Office of Technology Assessment?

A New Meaning for the Words *Technology Policy*

- Since the early 1980s, “technology policy” has been applied to government programs and activities to encourage the development and adoption of new technologies of any kind
- Beginning around 2005, “technology policy” began to be used to mean policies for development and use of information technologies; i.e., “IT policy”
- “Innovation policy” is being accepted as the new name for what was technology policy
  - Doesn’t fit well in traditional S&T agencies
  - No agency is currently responsible for innovation
  - Unresolved question about the role of the proposed “Chief Technology Officer”

Elements of Future Innovation Policy

- Building public/private partnerships to revitalize America's damaged industrial sectors
- Encouraging restoration of venture capital
- Reforming intellectual property policy and procedures
- Strategic deployment of standards for competitive advantage (within WTO rules)
- Promoting new approaches to education for a global economy at all levels (the "Post-Scientific Society")
- Stimulating global cooperation in innovation
- Re-purposing nuclear weapons laboratories to work with industry on competitiveness problems
- Consideration of a new federal agency or bureau to be responsible for innovation policy

A Concluding Thought To Put Obama in Historical Context

"…[this] book of 19-century ideals that portrays America as one part Google, one part melting pot and one part utopian dream may just have found its moment at the inauguration, eight years late, of the 21st century [emphasis added]."

- From a review in The New York Times by Jedediah Purdy of "Beyond the Revolution" by William H. Goetzman (February 22, 2009)

Is the Obama Administration Up to the Challenge?

Yes, it is

Thank you!

Questions?