Draft Talking Points on IPCC Process and Science of Climate Change: 4/3/01

IPCC: Background:

- Intergovernmental Panel on Climate Change (IPCC) established jointly by the World Meteorological Organization and the United Nations Environment Program in 1988.

- IPCC assesses scientific, technical, and socio-economic information relevant for the understanding of climate change.

- IPCC generally relies on published, peer-reviewed material rather than creating new analyses. Major IPCC reports provide synthesis and state of knowledge; have become standard reference material for scientists and analysts.

- IPCC made up of Working Group I (underlying science), Working Group II (socio-economic and environmental effects of climate change), Working Group III (options to limit greenhouse gas emissions).

- Many hundreds of scientists contribute to report preparation and review. Authors selected on basis of their known publications and works; IPCC states as principal its aim to include authors with range of views; and range of geographical representation.

- High representation of US scientists in IPCC process because so much climate change research is conducted in US.

- IPCC information must pass several review phases: internal review by IPCC authors; external review by experts; government and stakeholder review; all summaries go through line-by-line review in formal plenary sessions.

IPCC Findings:

- IPCC recently produced its Third Assessment Report. Key statements from Working Group I:
    - Increasing body of observations gives collective picture of a warming world and other changes in the climate system.
    - Present CO_2 concentration has not been exceeded during past 420,000 years and likely not during the past 20 million years.
    - Confidence in the ability of models to project future climates has increased.
    - Now stronger evidence for a human influence on global climate than at the time of the Second Assessment Report [1996].
    - Atmospheric composition will continue to change throughout the 21st century.
    - Global average temperature and sea level are projected to rise under all emission scenarios.
    - Many gaps in information and understanding remain.

- IPCC Third Assessment Report reinforces previous key IPCC conclusions:
    - Projected rates of global temperature increase would be without precedent during last 10,000 years.
    - Estimate about how sensitive climate is to increasing greenhouse gas levels has not fundamentally changed since IPCC first assessment in 1990.
    - Globally averaged precipitation projected to increase; intensity of rainfall events projected to increase.
    - Projected drying of mid-continental areas during summer.
    - Projected more frequent extreme high maximum temperatures and less frequent extreme low minimum temperatures.

<u>Individual Contributors to IPCC including Richard Lindzen</u>:

- IPCC Third Assessment Report summary based on draft of 59 scientists, including:
    - Dan Albritton, NOAA (recently briefed Powell, O'Neil)
    - Michael Oppenheimer, ED (recommended expert by O'Neil memo to Bush)
    - Mack McFarland, Dupont
    - Haroon Kheshgi, Exxon
    - Robert Watson, Chair of IPCC

- Richard Lindzen, MIT will be briefing cabinet-level review. Lindzen has argued that global warming will be significantly less than projected by IPCC due to changes in atmospheric water vapor. Lindzen also has other general criticisms.

- However, IPCC chapter of which Lindzen was one lead author concludes:
    - Water vapor increases, as derived from current models, approximately doubles warming from what would occur for fixed amount of water vapor.

- Observational evidence also runs counter to Lindzen's hypothesis. Accepted notion that water vapor changes exacerbate global warming.