Many of the most significant geopolitical and security issues currently challenging societies, both developed and developing, are directly connected to the remarkably rapid and profound scientific and technological (S&T) advances of our time. At the outset of the 21st century, however, most societies are having difficulty deciding which of these dramatically new S&T opportunities to embrace and which to reject. Such challenges are especially complex when there is significant public and private sector disagreement about even the existence of the problem, as well as its source(s).

Of the seemingly innumerable challenges associated with S&T being debated (e.g., sustainable energy sources, infectious diseases and pandemics, food safety and security, radicalization of cultures), those connected to “climate change” are among the most intractable. The often-irrational discourse and public uncertainty about climate change defines how complex and challenging such issues can become. While public and political disagreements rage over the existence of climate change, and certainly its relationship(s) to human activities, there are increasing physical indications that changes in climates (local, regional and global) are occurring with a rapidity and severity not anticipated by many credible scientists. The need to accurately characterize climate change and its relationship to human activities is especially urgent given the worldwide decisions now being made concerning the use of different sources of energy (and their respective impacts on climates).

There is a need to more effectively engage the average citizen in the increasingly contentious discussions concerning the reality of climate change and its potential significance in their lives. While acknowledging the difficulty and almost quixotic nature of engaging the average citizen on such a complex topic, it is evident that a new, more effective effort is required to reconcile opposing views in order to obtain practical policies that can be implemented and publicly supported.

To ensure that the societal debates of climate change issues lead to effective governmental and private sector policies, two types of engagements are needed:

1. It is critical that well-informed, credible scientists and technologists candidly communicate the advantages and risks of practical options for producing environmentally compatible energy to those governmental and private sector policy makers who are currently responsible for these decisions. Such efforts are underway in many forums including those organized and convened by the Institute on Science for Global Policy (ISGP), see Appendix below.

2. Average citizens must be able to evaluate recommendations based on the predictions from climate change models against often expensive and difficult alterations in their personal lifestyles. Since citizen legitimately have concerns regarding the credibility of information provided to them from multiple sources, they deserve the opportunity to question specific
recommendations based on their own perspectives. The political environments needed to meet the challenges of climate change cannot be created without broad, sustained public endorsements. While the public is rarely convinced to support change in large numbers, persuading that portion of the public (perhaps 15%) that routinely influences policy decisions through candid, rational assessments of the choices available could be an achievable goal. This is the audience on which the project proposed here focuses.

Eventually, the outcomes of such candid debates depend on what degree of certainty citizens attribute to the relationship(s) between climate change and specific human activities. As important, to what extent do citizens believe the remaining uncertainty justifies their accepting the costs and risks associated with the policy, societal, and business decisions that are demanded? Since these decisions often require retrenchments in the lifestyles of average citizens (e.g., higher fuel efficiency transportation, reduced energy consumption, different choices for food and housing), sustained public support is essential to motivate those involved in the policy process to act.

Before acting, policy makers have historically sought a degree of certainty concerning climate change that is unrealistic given current S&T understanding. Finite and often large uncertainties are a part of most scientific analyses and, in contrast to the optimism of many researchers, it is rare that all possible positive outcomes in S&T models are realized. Nonetheless, it is necessary to recognize that significant consequences can be reasonably anticipated if no proactive decisions concerning climate change are made and implemented. Such decisions, of course, must balance the often-contradictory goals of public and private sector policy makers (e.g., maximizing economic prosperity while acknowledging the need to reflect cultural sensitivities concerning any change).

The ICCAP seeks to help accurately define these uncertainties and lead policy makers, both governmental and private sector, to recognize practical pathways forward concerning the mitigation and adaptation to climate change.

ISGP Climate Change Arctic Program (ICCAP)
ICCAP is designed to provide citizens with unique opportunities to learn from presentations and debates with internationally credible scientific and policy experts concerning how climate change viewed globally may be relevant to them as individuals, as well as to their respective communities.

A series of community-wide meetings, organized by the ISGP and convened using the debate-and-caucus format pioneered by the ISGP, are being held in numerous U.S. communities throughout 2015. These meetings focus on issues of specific importance in each community concerning how climate changes can be anticipated to directly affect both individuals and community decisions. Each meeting provides a wide range of U.S. citizens who often hold diverse views on climate change with opportunities to review policy position papers prepared by highly credible and well-informed experts, and then to join fellow citizens in questioning and debating these experts concerning their recommendations. Attention is given to how the impacts of changing climate may be relevant to individual and community decisions, especially those focused on mitigating and adapting to the potential impact of climate change.

The target audiences for ICCAP are citizens who are uncertain as to how recent climate events may be associated with serious climate change issues and if these events have a clear relationship(s) to man-made activities. Independent of their uncertainties, these events foster
open, rational debates with scientific experts and political figures by focusing on answers to the specific questions.

ICCAP debates can provide nonspecialist citizens with access to a cross section of views based on credible S&T understanding and international perspectives that emphasize rational thinking, minimal political posturing or lobbying, and provide ample opportunity for disagreement.

**ICCAP Arctic Component**
An ICCAP planning meeting was held in Norway in September 2014 that included representatives from several Norwegian and U.S. communities concerned about the local effects of globally changing climate. In addition to ICCAP’s U.S. conferences, ISGP-style events are being planned in selected communities in Norway in 2015.

**Concluding remarks**
ICCAP activities help citizens and communities prioritize the personal, local, and regional decisions intended to help mitigate and/or adapt to changing environmental conditions and eventually enhance the prosperity, resilience, and sustainability of communities *writ large*.

It is important to note that as a nonprofit organization, the ISGP expresses no independent opinions on any of the topics being addressed through its programs and does not lobby on any issue except rational thinking.
Appendix
Institute on Science for Global Policy (ISGP)

The ISGP is a not-for-profit organization that does not lobby on any scientific or technological issue or policy position, but does promote rational thinking.

The ISGP has pioneered a new, robust design for invitation-only forums using not-for-attribution (Chatham House Rule) environments that foster vigorous, candid debates and caucuses. Such environments are well suited for addressing the challenging issues related to the influence of scientific and technological (S&T) advances on the choices made by individuals and the decisions made by their respective communities. The current S&T understanding of such potential impact is presented in a few (typically eight) concise (three pages) policy position papers prepared by distinguished, highly credible subject-matter experts. These authors’ views are debated by a group of S&T experts, policy makers, and stakeholders in these not-for-attribution environments. All material debated reflects international perspectives and focuses attention on effective global solutions. Invitations to the eight authors of the policy position papers are based on extensive (100s) interviews by ISGP staff to establish the debate topics and to identify individuals who can artfully engage those nonspecialists who are often responsible for formulating and implementing public and private sector policies. The approximately 60 invitations to join the audience at each ISGP conference are extended by the ISGP to representatives from governments, the private sector, and nongovernmental organizations in 12 to 15 countries.

ISGP conferences are distinct in a variety of ways. First, complex topics are examined through a series of conferences convened in different venues over a 2-year-plus period. The focal points for each ISGP conference are intended to systematically consider specific aspects of these complex, increasingly global issues. The ISGP approach recognizes that one conference with a few exceptionally qualified individuals is unlikely to successfully address such complicated issues. Given the remarkably rapid advances in S&T, as well as the broad international sources from which these S&T advances emerge, the effectiveness of any policy decision critically depends on incorporating the global perspectives held by multiple generations. The ISGP debates and caucuses focus on identifying viable areas of consensus and specific actionable next steps. ISGP conference participants do not solely debate options, but in addition, identify specific next steps that they agree can be practically implemented. In recognition of the cultural and political diversity found in most societies, ISGP conferences seek to identify next steps that can garner the broad support for both public and private sector decisions.

The ISGP has successfully examined numerous S&T topics of critical interest in 21st century policy decisions. These include (i) Emerging and Persistent Infectious Diseases (EPID) and 21st Century Borders (21CB), (ii) Food Safety Security, and Defense (FSSD), (iii) Environmentally Compatible Energy (ECE), and (iv) Science and Governance (SG).

ISGP Conference Format
The unusual, if not unique, structure at each ISGP conference is designed to ensure candid, productive debates and caucuses. The authors of the policy position papers are asked to identify the current realities, the credible S&T options, and the policy issues they view as critical to making effective public and private sector decisions. Each policy position paper is debated for 90 minutes of which the author is provided 5 minutes to summarize the essential points. The remainder of the 90 minutes is provided to the audience to asked questions, make comments, and engage in the critical discussions that would lead them to support or reject the
recommendations made in the policy position paper. All of the policy-paper authors are part of these debates.

The 90-minute debates are followed by caucus sessions designed to have all authors and participants identify areas of consensus and actionable next steps to be recommended to the domestic and international policy communities. First, all participants are divided into groups of about 12. The results from these smaller caucuses are summarized for discussion the following day in a plenary session involving all authors and participants.

All the policy position papers, not-for-attribution summaries of the debates (prepared by the ISGP staff), areas of consensus, and actionable next steps are published within about four months of each ISGP conference in a book that is available to the public at no cost.

Finally, upon request, the ISGP provides detailed briefings on the results from its conferences to government agencies and departments, private sector entities, the nongovernmental advocacy community, and the public in general. All of these activities are conducted while preserving the nonadvocacy position of the ISGP that focuses on developing and communicating the views of credible subject-matter experts and influential public and private sector policy makers.
Institute on Science for Global Policy
Climate Change Arctic Program (ICCAP)

Scheduled U.S. Conferences 2015

February 20-21, 2015
TUCSON, ARIZONA • Living with Less Water

June 5, 2015
WHITTIER, CALIFORNIA • Sustainability Challenges: Coping with Less Water and Energy

July 25, 2015
ALPENA, MICHIGAN • Great Lakes Climate Concerns: Freshwater Seas and Surrounding Communities

September 18-19, 2015
TOMS RIVER, NEW JERSEY • Preparing for the Inevitable: Severe Storms and Seawater Rise

October 2-3, 2015
ST. PETERSBURG, FLORIDA • Sea Level Rise: What’s Our Next Move?

November 2015
LINCOLN, NEBRASKA • Drought and Agriculture: Looking Ahead