

**Testimony of
Dr. Catherine Hunt
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before the
U.S. House of Representatives
Committee on Science
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Chairman Boehlert, Ranking Member Gordon, and distinguished members of the Committee:

Good Morning. My name is Dr. Catherine Hunt.

I am pleased to address you this morning on behalf of the more than 158,000 chemical professionals (chemists, engineers, educators and entrepreneurs) of the American Chemical Society (ACS), the largest scientific society in the world. I am the 2007 President of the Society and I'm also a technology manager with Rohm and Haas, an \$8 billion specialty materials company, where I manage technology partnerships with the public and private sectors.

Today's hearing explores how Congress receives and analyzes the scientific and technological information that it requires to evaluate legislation, and how those information-gathering processes might be improved. As technology increasingly drives our nation's economy, security, and quality of life, the list of policy issues that demand sound science and engineering understanding is rapidly expanding in size and complexity. Over the past month, the House has held hearings on topics ranging from energy to climate change, from cyber security to voting standards - all of which contain a strong element of science and that might have benefited from additional technological assessment. In fact, I don't believe that there is a Congressional Committee that does not in some manner deal with science and technology issues - even though it may not be obvious at first blush. For instance, if we consider water quality and supply, the Agriculture Committee is concerned about water conservation, the Energy and Commerce Committee has jurisdiction over drinking water, the Transportation Committee handles clean water, this Committee has oversight of water-related research and the International Relations Committee needs to understand technologies that impact potable water resources in the Middle East.

Sometimes information received by these Committees, though popularly accepted and reported as fact, ultimately turns out to be unreliable, or worse yet -- false. I think we would all agree that legislative action taken on the basis of this type of information would be regrettable and potentially damaging. Sometimes public opinion can drive policy, but as important as public opinion and media reports are, we mustn't allow these to push a rush to judgment without a careful evaluation of the facts. This is where I think it becomes increasingly important that Congress have a reliable, credible and unbiased source for scientific and technical assessment to help it sort through complex and often conflicting data.

Take this glass of water as an example. It looks perfectly clean and pure – and it probably is. But given the new advances in chemical detection technology, I'd venture to say that we could find numerous trace chemicals and minerals in this glass that five years ago would have been impossible to detect. Today's analytical technology takes us down to the part per quadrillion level – a part per quadrillion is equal to one inch in the distance you must travel to make 168 roundtrips to Mars. But would we, or should we, legislate an immediate ban on the materials found in this glass of water just because we could detect them? In this example, I would suggest that information about the presence of these substances in and of itself should not be the basis for legislating a ban on the material, but rather such a decision should be based on an assessment of what impact, or potential impact, might these materials have on the health of the drinker – if any.

It is well known that the demands and expectations on Congress continue to increase. Ease and reliability of electronic communications has resulted in Congress being bombarded on a daily basis with hundreds of thousands of emails, faxes, and phone calls from interest groups, trade associations, scientific societies, and interested citizens and constituents. This constant river of communication is sorted, categorized, and assimilated by Members of Congress and their staffs to identify that most valuable of treasures in Washington – reliable information.

Since its founding in 1876, ACS has viewed the effective dissemination of reliable information and advice as one of its central functions. In fact, ACS was chartered by Congress in 1937 to share scientific knowledge with a broad constituency, including the Congress and the Executive branch. In truth, sharing scientific information is fundamental to scientific and technical societies and associations. Collectively, they provide a direct source of information and analysis

via testimony and letters, face-to-face meetings and consultations, formal and informal communications, and other types of interactions.

These organizations also organize educational and informational briefings for members and staff on a wide variety of science and technology issues. Since 1995, the ACS Science & the Congress program has hosted 109 briefings on Capitol Hill that seek to provide balanced and unbiased first-hand information from subject-matter experts on a wide range of technical and public policy subjects. The feedback we have received from these briefings, which are well attended, is that they provide a balance of views and an educational overview for congressional staff who are generally seeking such information on a just-in-time, tell-me-what-I-need-to-know basis.

Many other stakeholders in the legislative process utilize the same tools and seek to provide similar services, including think tanks, universities, federal agencies, trade associations, and companies. Most of these groups place great emphasis on their own credibility before Congress and thus strive to be regarded as honest brokers of reliable information. However, to some extent, most of these outside sources of information have a vested interest in the outcome of your deliberations.

The flow of scientific and technical information to Congress from any source should be subjected to critical measures: Is it accurate? Is it complete? It is current? And, most importantly, is it reliable? To be able to use this information, it is also important that it be available in a timely manner and in a way that it is easily used by those without backgrounds in science and technology.

To meet its need for science and technology assessments, Congress clearly should continue to use outside experts, including the National Academies, to scope, integrate, and provide non-partisan analysis of large-scale complex issues involving science and technology. However, these experts cannot meet all of Congress' frequent and extensive needs, and ACS believes that Congress should have greater access to assessments on a wider range of subjects than outside organizations are capable of providing.

Since the elimination of the Office of Technology Assessment in 1995, Congress has functioned without an impartial internal unit that can frame complex issues, provide comprehensive and

balanced insights and analysis, and set out policy options on science and engineering issues. Members of Congress have had to rely more heavily on their personal staffs and on the relatively small number of expert professional staff that populate Committees like yours to perform this critical function. Congress also taps the professional expertise at the Library of Congress Congressional Research Services (CRS) and the Government Accountability Office (GAO).

Many experts believe that these congressional support agencies are not currently structured and staffed to perform all of the in-depth, unbiased scientific and technical analyses required by legislators. Congress should consider establishing an in-house science and technology unit that supplements their capabilities and provides timely, thorough assessments for decisions on issues involving a wide range of science, engineering, and technology. This unit could be housed in CRS, GAO, or stand alone as a congressional support agency.

What would such a unit look like? A properly structured, in-house unit should have sufficient staff to furnish complete analyses. It also should rely significantly on outside experts to refine their input for congressional use. Its operations should be economical and efficient in order to provide a regular stream of timely advice to Congress. The new science and technology assessment unit might also consider leveraging current science and technology fellowships funded by outside groups, and sponsor new fellowships to supplement its standing capabilities. By placing scientists and engineers in various legislative offices and committees, the new unit would be more relevant and approachable to all congressional members and staff.

To be effective, a new science and technology assessment unit must be equally effective in two sometimes contradictory functions—(1) assembling world-class scientific and technology assessments and (2) providing information to Congress in a form and manner that facilitates your making policy decisions. In the former area, the unit should use the existing models, including openness and peer review, that allow the National Academies, academics, and think tanks to assemble world-class science and technology reports. While I am not an expert on the latter challenge, I would observe that you are in the best position to determine how the unit should be organized to most effectively operate in your unique environment and meet your needs.

Thank you for this opportunity to present our views on this important topic. I will be happy to answer any questions you may have.