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Legislative Branch Appropriations Subcommittee

Member Day Testimony

Thank you, Chairman Ryan and Ranking Member Herrera Beutler, for providing members the opportunity share our thoughts on the FY20 appropriations bill for the Legislative Branch.

When I graduated with an M.S. in Chemical Engineering in 1998, my first job was as a technology consultant at Arthur D. Little, working in their energy practice. Our clients ranged from government agencies (US and Foreign) to Fortune 500 Companies to technology startups. In all cases, our work was to evaluate technologies and strategies relating to alternative energy. Over the course of 2 years at the firm, I worked on comparative analysis of emerging battery chemistries, evaluated the cost and emissions signature of various transportation fuel chains, advised governments on the codes and standards developments required for a hydrogen delivery infrastructure, and tried (unsuccessfully) to persuade auto manufacturers that they should market the fun acceleration of their electric vehicles rather than their limited range.

My work as a consultant required some original research, but I often depended on reviewing existing technical analyses. Among those sources that I relied upon, I quickly realized the reports prepared by the Congressional Office of Technology Assessment (OTA) were among the most technically rigorous, dispassionate, and comprehensive on a wide array of technologies that

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at the time were just emerging such as hydrogen storage and biomass gasification. Unlike other sources, OTA Reports provided clear overviews of how technologies worked and the key obstacles to their commercialization.

However, it also soon became apparent that OTA reports stopped a few years before my job started. When I asked my boss how to get more current reports, so as to ensure that I wasn't unduly relying on stale information he told me that "Gingrich killed the OTA. It's too bad for you because you have to do the research now, but it's great for the firm because now instead of our customers getting the information for free, they have to hire us to do them."

OTA was enacted by Congress in 1972. The mission of the agency was to provide lawmakers with the expertise on a wide array of emerging technological and scientific challenges through nonpartisan analysis. As laid out in law OTA's function was "to provide early indications of the probable beneficial and adverse impacts of the applications of technology and to develop other coordinate information which may assist the Congress." In this mission, OTA built a team of skilled researchers who not only examined the problems from an academic perspective but were well equipped to reach into the private sector and government to assess the practical impacts of emerging technologies and their potential ramifications both in the immediate and long-term. Such analysis not only allowed members of Congress and their staffs to be better informed on these issues but also provided useful frameworks to facilitate proactive instead of reactive policymaking – something which this body is too often unable to accomplish.

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The absence of the OTA is even more disconcerting given the astounding rate at which new technologies, innovations, and industries have developed over the last two and a half decades since the OTA was shuttered which shows no evidence of slowing. Today, we face a barrage of complex issues brought on by an unprecedented level of technological disruption across all aspects of life. The examples cut across all committees in Congress - from the advent of the internet of things and the cybersecurity threats which follow, the ubiquitous use of social media platforms and concerns over privacy and foreign influence, the gig economy changing employment and labor, cryptocurrencies, mail-order genetic testing and the proliferation of and use of genetic editing technologies such as CRISPR, autonomous vehicles, geoengineering... the list goes on.

In any given week, this body will debate many of these and other complex topics, and the decisions we make may have a profound influence on the daily lives of our constituents. However, the technical capacity and dedicated resources for understanding how the private sector is utilizing these new technologies are limited.

While the Congressional Research Service (CRS) does tremendous work in keeping this body informed on a wide array of relevant policy issues, they are not equipped to fulfill the forward-looking, deep-dive, technical assessments of new scientific and technological developments once provided by OTA. Instead, for this kind of analysis, Congress is left to rely on experts from the Executive Branch or non-governmental groups, groups with often biased or competing perspectives. While outside knowledge is a necessary and useful tool for members of Congress, without a truly nonpartisan and responsive source for information, Congressional oversight of

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Executive agencies and the private sector becomes increasingly fraught, less informed, and driven by partisan ideologies instead of reliable facts.

Each of us who serve in Congress brings a unique perspective and expertise which informs how we serve our constituents. As I mentioned, I worked as a technology consultant in the energy sector and would eventually go on to become the CEO of a clean energy company. And so, while I do claim to be an expert in many of the complex energy policy debates happening today, I cannot claim that I am an expert when it comes to the equally complex policy debates happening around cybersecurity, cryptocurrencies, or gene-drive technologies. I, like most of my colleagues, rely on own research, my staff, committee staff, and a litany of other resources like CRS, GAO, CBO, and others to inform my thinking on these issues. These are useful resources, but I believe there is an intrinsic value in having one voice upon which all members can call upon confidently when drawing conclusions on these complex issues. It frustrates me that we recognize the value of that impartial, reliable analysis when funding the CRS, but have thus far failed to recognize it for an agency that would address some of the most complex issues we face as a chamber and a society.

Shockingly, the OTA has never been resuscitated. Equally shocking is that while many of those same technologies on which I read OTA reports as a consultant have advanced dramatically in the ensuing 20 years, many of them are still at the same stage of development. These technologies, once promising, are still commonly portrayed as “5 years from commercialization” - the perpetual bane of many technologies that are just immature enough to attract R&D but far enough away to still be out of reach.

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If we still had the OTA, we would have a rich resource of public data that would not only shed light on these commercialization gaps but could also help policymakers grapple with these shortcomings and where it serves the public interest, provide better supports to these industries. Yet, in the absence OTA, we are left with researchers having to tilt at the same windmills in perpetuity, forever “rediscovering” things we knew 20 years ago at a higher cost to all parties involved.

For these reasons, I would respectfully urge this committee to strongly consider restoring funding to the Office of Technology Assessment (OTA) when developing the FY20 appropriations bill for the Legislative Branch.