Committee on Energy and Commerce
U.S. House of Representatives

Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

1. Your Name: S. William Gouse III		
2. Your Title: Director, Federal Program Development		
3. The Entity(ies) You are Representing: SAE International		
4. Are you testifying on behalf of the Federal, or a State or local government entity?	**Yes**	**No** X
Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2015. Only grants, contracts, or payments related to the subject matter of the hearing must be listed. **DTFH6111D00050, ITS Message Set Standards Support, issued October 2011, $40,000 received since 2015** **DTFH6116D00054, Development of National ITS Architecture Standards, issued September 2016, $0 dollars received**		
5. Please attach your curriculum vitae to your completed disclosure form.		

Signature [redacted]

Date: 24 March 2017

S. William Gouse III, SAE International

Over thirty years of domestic and international experience in the vehicle design and manufacturing industry, in senior leadership positions at transportation associations, and at universities in automotive and highway transport research, development, product and strategic planning, project management, system architecture, designing and delivering training, communications and outreach, standards, regulatory, and technology policy with respect to passenger and freight mobility, safety, security, emissions, energy, climate change, societal and institutional issues. Published and presented numerous technical and policy papers and peer-reviewed articles on emerging vehicle technologies and trends, alternative energy sources, emissions, highway safety, communication and control systems, and intelligent transportation systems.

SIGNIFICANT CAREER ACCOMPLISHMENTS:

On the 477th anniversary of the city, I was awarded the status of "Honorary Counsellor of Trujillo, Peru" for my contributions and technical leadership as transportation planner, developing standards, system and procurement specifications, economic analysis, and regulatory policy for their new bus fleet. The project, funded by the Municipality of Trujillo and the National Development Bank, upgrades the vehicles, fueling systems, and transport operations to dramatically reduce energy consumption, vehicle emissions and increase passenger, pedestrian and other road users' safety and security.

Conducted and led extensive product planning studies and financial analysis of intercity, long haul trucking operations to quantify the fuel consumption and emissions production of "sleeper tractors" parked overnight at rest areas and truck stops. This study resulted in a requirements evaluation that was used to develop the world's first application of fuel cell technology in a commercial vehicle; a fuel cell powered auxiliary power unit (APU) to generate electricity and heat. Coupled with appropriate power conditioning technology and electric driven climate control, this concept demonstrated the capability of achieving all "hotel loads" with a 2-kilowatt APU versus being supplied by idling a multi-hundred horsepower diesel engine. While a "fuel cell" APU has not entered serial production, this concept successfully demonstrated the need for a fuel efficient and environmentally responsible APU. The market has responded with a variety of products spurred by this original development. As a result of this work, received the Society of Automotive Engineers Outstanding Commercial Vehicle Engineering Contribution, November 2002, "Fuel Cell Auxiliary Power Unit".

Advised and provided technical expertise to senior elected officials and C-level executives including conducting system, operations, economic and equipment evaluations, designing, and delivering transportation knowledge transfer programs, university, and continuing education curriculum for vehicle technology, passenger and freight mobility, safety, security, energy reduction, and environmental conservation. These programs spanned North and South America, and Asia. Subject matter included case studies, freight system evaluations, research agenda development and data analyses, social / institutional issues, economic, lending program assistance, and investment analysis for major transport acquisitions, and applications of various policies and technologies for operations, systems integration and architecture design.

Was the Principal Investigator and project manager/team lead, of Daimler Trucks/ Freightliner Corporation's Intelligent Vehicle Initiative. Under this cooperative agreement with the US Department of Transportation, I led the Freightliner team of engineers, suppliers, and a motor carrier (hazardous material transport fleet). The project encompassed the design, development, demonstration, and extensive field operational testing of a large truck / tractor-trailer stability system, called Roll Stability Control. This

heavy truck safety system has recently been the subject of a comprehensive evaluation by the National Highway Traffic Safety Administration. The conclusions of the study stated that "stability control systems provide substantial safety benefits". The study documents that as a result of this technology, over 100 lives are being saved each year, avoiding nearly 6,000 injuries, and property damage losses.

Two of my projects have been recognized for their innovation via display as exhibits at internationally renowned museums. The "Neurons to Networks" exhibit at the Smithsonian Institution's National Museum of American History depicts work performed while at General Motors as a project engineer. The exhibit shows how technology was used to automate a difficult and hazardous manufacturing process. The working exhibit shows a robotic autonomous welding and the use of statistical process control coupled with system prognostics and self diagnostics. The second display focuses on emerging technologies relating to potential highway safety improvement as a result of advances in vehicle control, sensor systems, and automation. The exhibit elements were provided to the London Science Museum's "The Future, Your Car" and were based upon work performed under contract to the US Department of Transportation.

EDUCATION:

Bachelor of Mechanical Engineering, Cooperative Program, 1982, Georgia Institute of Technology; Minor in Economic History of Technology with additional course work in Electrical Engineering, Computer Science, and Program Management
General Motors Institute Project Management and Quality Assurance Certifications, 1988
Masters of Science Transport Energy and Emissions and PhD (candidate), University of Leeds, UK
Particulate Emissions, University of Cambridge, UK, 2006
Climate Change Metadata, Massachusetts Institute of Technology (MIT) Seminar Series, 2007-2008
Energy Policy and Technology, MIT Seminar Series, 2008-2009
Hand Held Communicators: The Defining Technology for the 21st Century, MIT Seminar Series, 2009-2010
Security in Cyber Space, MIT Seminar Series, 2010-2011
Water Systems: Transport, Security, Purification Technology, MIT Seminar Series, 2011-2012
Rebuilding U.S. Manufacturing, MIT Seminar Series, 2012-2013
Modernizing the Electric Grid, MIT Seminar Series, 2013-2014

PROFESSIONAL AFFILIATIONS:

Board Member: Intelligent Transportation Society of Colombia, South America (ITS Colombia)
Chairman, National Research Council, Transportation Research Board: Truck Idling Study
Member: Intelligent Transportation Society of America (ITSA)
Member: Society of Automotive Engineers (S.A.E.), Truck and Bus Council
Member: American Society of Mechanical Engineers (ASME)
Member: National Research Council, Transportation Research Board (NRC/TRB) Committees: Truck and Bus Safety, Transportation Energy, Transportation and Air Quality
Vice Chair Study Group, Technology and Maintenance Council
Board Member: Washington Intergovernmental Professionals Association
Member, National Academy of Sciences Review Committee: Truck Energy, Environmental and Safety Research
Member: United States Environmental Protection Agency (US EPA) Clean Diesel Independent Review Subcommittee, Clean Air Act Advisory Committee

EXPERIENCE:

Director, Federal Program Development, Global Ground Vehicles, SAE International, January 2015 – Present
SAE International is a global technical society in the aerospace, automotive, and commercial vehicle industries and is a leading consensus open standards development organization. As the business programs director, develops, maintains and expands relationships with key federal agencies, congressional members and staff, and other organizations, along with building relationships and supplying technical information to state, local, and internationally with governments, the United Nations, development banks, and organizations who are relevant to the strategic intent of SAE International. Business activities include, but are not limited to, the development, management and marketing of SAE standards, SAE Cooperative Research Program (CRP) and Industry Technology Consortia (ITC), workforce development programs, certification programs, referee materials and identifying markets for the same.

Principal Consulting Specialist and Consejero Academico, Systemas Inteligentes de Transporte Ltda., 2010 - 2014
Systemas Inteligentes de Transporte Ltda is an international transportation, transit, and logistics, and association management consulting engineering firm with projects in South America, South East Asia, and North America. As the vehicle technology, freight and logistics specialist, am currently defining comprehensive energy efficiency, safety, environmental, and security system specifications for several major public transportation systems acquisitions, performing lending assistance with financial productivity performance analysis of capital and operational investments and legacy concession agreements. Two of these acquisition projects are for complex multi-tiered Public Private Partnership transit systems for Trujillo Peru and Tunja Colombia with funding by National and Andean Region Development Banks, the municipalities and consortia. Have performed requirements analysis and defined vehicle size and weight criteria for national regulatory and enforcement policy and with defining operations measurement criteria, conducted engineering, procurement, operations and maintenance contracts. Additional responsibilities include advising international clients regarding safety, environmental, and operations and border crossing/credentialing technologies for multiple transport modes, hazardous materials and specialized freight transport, incident response, and developing a series of design guidelines and planning protocols for complex highway transportation system management. In conjunction with the Univesidad Catholica de Colombia, ITS Colombia, Andean, and also at the Universidad Pedagogica y Tecnological De Colombia, am designing and delivering a transportation diploma curriculum as part of both a continuing education program and for graduate university students. Contents include transportation asset management and economics, highway safety, energy and emissions, climate change, transportation planning for historic and natural preservation, vehicle and operations technology, freight mobility, supply chain and logistics management systems, communications, cooperative, autonomous, ITS architecture, standards, and geographic information systems.

Principal Investigator, Open Roads Consulting Incorporated, February 2009 - January 2010
Open Roads Consulting Inc. specializes in technology integration and full life cycle application development, deployment, operations, and maintenance of intelligent transportation systems, physical security systems and training and education. As Principal Investigator, was responsible for developing and managing international, Federal and state projects relating to intelligent transportation systems, traveler information and mayday systems, commercial vehicle operations, freight movement, communication systems, and environmental studies. Assisted clients with preparing USDOT TIGER grant applications. Portfolio included: developing procurement and performance recommendations for the Republic of Colombia for Trans-Andean La Linea Tunnel pertaining to incident management and Intelligent Transportation Systems, commercial vehicle enforcement, dangerous goods shipments and oversize/geometrically challenging freight movement; advising Ministry of Transport – Vietnam

regarding transportation safety, security, and tolling and border crossing technologies, and developing a rural ITS technology conference.

Vice President, Intelligent Transportation Society of America, June 2006 – January 2009
The Intelligent Transportation Society of America focuses on the development and deployment of intelligent transportation systems in the US and internationally that will improve transportation safety, reduce transports impacts to the environment, and enhance security and efficiency for both the travelling public and freight. As the Vice President of Technical Programs, was the Principal Investigator for the multi-million dollar contract with the United States Department of Transportation and also provided oversight for all of the society's technical activities along with member committees and forums for technology, policy, advocacy, and training and continuing education activities. Under contract, managed stakeholder groups such as the Traffic Incident Management Coalition and the Public Safety Advisory Group (later as the Traffic Safety Advancement Group). Responsible for providing day-to-day guidance to staff regarding research project formulation, program development, technical issues, project execution, training, budgets and resource allocation, and strategic planning. In addition to the US DOT contract, managed the San Diego Service Authority for Freeway Emergencies Motorist Aid of the Future program, conducted the technical design and analysis of the Japan International Transport study on transit expansion emissions modeling, provided the ITS input to the US Commerce Department Standards in Trade technology scan and exchange with People's Republic of China, and contributed to the Andean ITS Architecture project.

Executive Director, United States Council for Automotive Research, February 2005- March 2006
The United States Council for Automotive Research (USCAR) is the umbrella organization of DaimlerChrysler, Ford and General Motors, which was formed to strengthen the technology base of the domestic auto industry through cooperative research, development and non-proprietary design activity for energy efficiency, emissions reduction, and safety improvements. USCAR is involved in a variety of cooperative university, Federal and state research projects. As Executive Director, was responsible for managing the administrative, operations and technical activity of the organization, developing cooperative research programs, growing the multi-hundred million dollar portfolio, and advocating appropriate technology policy and research programs. The temporary position is rotated for senior automotive industry executives with varying backgrounds.

Vice President of Engineering, American Trucking Associations, December 2001- February 2005
The engineering department supports several member led policy groups and committees including the ATA Engineering and Technology Policy Committee, Energy and Environmental Committee, the Safety Committee, the Technical Advisory Group, and the Technology and Maintenance Council. The Vice President was responsible for managing the American Trucking Associations Engineering Department staff, budget, and projects and being a technical extension to members' resources. In addition to ATA internal activities, represented the ATA and motor carriers as a subject matter expert on the US Environmental Protection Agency Federal Advisory Committee for review of diesel engine and diesel fuel and emissions reduction technology, and the Secretary of the Vehicle Committee of the Commercial Vehicle Safety Alliance. ATA engineering supports all motor carrier and supplier members, affiliates, and Federation membership with technical support and guidance. ATA engineering also supports Federal, State and Municipal governments with engineering and technical information relating to regulatory and policy activities. Directed all the cooperative government and university engineering research, development, and demonstrations performed by the ATA.

Executive Engineer, Technology Planning, Government and Technical Affairs, Freightliner LLC
September 1997- December 2001
As the Executive Engineer, was responsible for a variety of product research and development programs, strategic product technology planning, and initiating and managing co-operative programs with

government agencies and academic research institutions. Was the program manager for the Freightliner led team in conjunction with the University of California, Davis and the California Air Resources Board for development and in use trials of Selective Catalytic Reduction for on-highway applications. Hosted the US Department of Transportation Federal Motor Carrier Safety Administration International Technology (DOT) Scan and was also the program manager of the US DOT Intelligent Vehicle Initiative truck Roll Stability Advisor and Control Field Operational Test, and the joint US DOT/ Defense Advanced Research Projects Agency (DARPA) Advanced Vehicle Program Fuel Cell Auxiliary Power Unit demonstration program. This fuel cell demonstration program was the world's first application of a fuel cell as an auxiliary power unit for on-highway trucks. In addition, was responsible for new cooperative program development with all academic institutions, Federal and state agencies for the Freightliner LLC divisions. Also responsible for the internal corporate and external technical communications for the engineering department and those presented by the Senior Vice President of Engineering and Technology. This included developing sales materials, multi-media and web based materials, press conference support and press releases, media relations, and new product introductions at dealer meetings, industry, university, and government events, and vehicle trade shows.

PUBLICATIONS:

Are Communications, Safety, and Emissions Control Technologies "Paving the Way" for the Convenience of Automated Driving? A Historical Perspective of the Development of Driver Assistance and Autonomous Systems, Andinatraffic Edicion No. 10, Bogota' Colombia, March 2013
System Reliability: Design, Construction, Maintenance, & Operations Analysis Integration: An Introduction to Failure Mode Effects Analysis Applied to Highway Transport Projects, Andinatraffic Edicion No 8, Bogota', Colombia, March 2011
Human Services / Public Transportation Coordination; Recent Regulatory Funding Programs and Case Examples, Andinatraffic Edicion No 7, Bogota', Colombia, May 2010
Heavy Goods Vehicle Technologies: Different applications converging to enhance safety, security, and productivity. A Monograph for Commercial Vehicle and Port Operations, Andinatraffic Edicion No 6, Bogota Colombia, November 2009
Review of the 21st Century Truck Partnership, National Research Council, Washington DC, 2008
A Review on Miniaturization of Solid Oxide Fuel Cell Power Sources-I: State –Of –The-Art Systems, NATO Science for Peace and Security Series C, Environmental Security, Netherlands, 2008
Technological change in niches: Auxiliary Power units and the hydrogen economy, Policy Studies Institute, London 29 January 2007
Intelligent Transportation Systems Market Data & Forecast: Infrastructure ITS, Washington DC, 27 November 2006
Evaluation of fuel cell auxiliary power units for heavy-duty diesel trucks, Transportation Research Part D, Washington DC, 2002
Evaluation of a Fuel Cell APU for Heavy-Duty Long Haul Diesel Trucks, University of California, Davis, 2002
Meeting Technology Challenges for the 2007 Heavy-Duty Highway Diesel Rule, US EPA, Washington DC, 30 October 2002
Transportation, Energy, and Environmental Policy; Managing Transitions, National Academies of Sciences, Washington DC, 2001
Truck Idling Trends: Results of a Pilot Survey in Northern California, Society of Automotive Engineers, Warrendale, PA, November 2001
Potential Benefits of Utilizing Fuel Cell Auxiliary Power Units in Lieu of Heavy-Duty Truck Engine Idling, University of California, Davis, 2001
Demonstration of a Proton Exchange Membrane Fuel Cell as An Auxiliary Power source for Heavy Trucks, Society of Automotive Engineers, Warrendale, PA, 2000
Urea-SCR System Demonstration and Evaluation for Heavy-Duty Diesel Trucks, University of California, Davis, 1999
Urea-Selective Catalytic Reduction System Demonstration and Evaluation for Heavy-Duty Diesel Trucks, Society of Automotive Engineers, Warrendale, PA, 1999