

Truth in Testimony Disclosure Form

In accordance with Rule XI, clause 2(g)(5)* of the *Rules of the House of Representatives*, witnesses are asked to disclose the following information. Please complete this form electronically by filling in the provided blanks.

Committee: _____

Subcommittee: _____

Hearing Date: _____

Hearing :

Witness Name: _____

Position/Title: _____

Witness Type: Governmental Non-governmental

Are you representing yourself or an organization? Self Organization

If you are representing an organization, please list what entity or entities you are representing:

FOR WITNESSES APPEARING IN A NON-GOVERNMENTAL CAPACITY

Please complete the following fields. If necessary, attach additional sheet(s) to provide more information.

Are you a fiduciary—including, but not limited to, a director, officer, advisor, or resident agent—of any organization or entity that has an interest in the subject matter of the hearing? If so, please list the name of the organization(s) or entities.

Please list any federal grants or contracts (including subgrants or subcontracts) related to the hearing's subject matter that you, the organization(s) you represent, or entities for which you serve as a fiduciary have received in the past thirty-six months from the date of the hearing. Include the source and amount of each grant or contract.

Please list any contracts, grants, or payments originating with a foreign government and related to the hearing's subject that you, the organization(s) you represent, or entities for which you serve as a fiduciary have received in the past thirty-six months from the date of the hearing. Include the amount and country of origin of each contract or payment.

Please complete the following fields. If necessary, attach additional sheet(s) to provide more information.

- I have attached a written statement of proposed testimony.
- I have attached my curriculum vitae or biography.

* Rule XI, clause 2(g)(5), of the U.S. House of Representatives provides:

(5)(A) Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof.

(B) In the case of a witness appearing in a non-governmental capacity, a written statement of proposed testimony shall include— (i) a curriculum vitae; (ii) a disclosure of any Federal grants or contracts, or contracts, grants, or payments originating with a foreign government, received during the past 36 months by the witness or by an entity represented by the witness and related to the subject matter of the hearing; and (iii) a disclosure of whether the witness is a fiduciary (including, but not limited to, a director, officer, advisor, or resident agent) of any organization or entity that has an interest in the subject matter of the hearing.

(C) The disclosure referred to in subdivision (B)(iii) shall include— (i) the amount and source of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) related to the subject matter of the hearing; and (ii) the amount and country of origin of any payment or contract related to the subject matter of the hearing originating with a foreign government.

(D) Such statements, with appropriate redactions to protect the privacy or security of the witness, shall be made publicly available in electronic form 24 hours before the witness appears to the extent practicable, but not later than one day after the witness appears.

False Statements Certification

Knowingly providing material false information to this committee/subcommittee, or knowingly concealing material information from this committee/subcommittee, is a crime (18 U.S.C. § 1001). This form will be made part of the hearing record.

A large black scribble redacting a signature.

Witness signature

Date



RESEARCH CONTRACTS AND GRANTS – 2018-2021

All sources of funding originate in the United States.

Karen A. Thole
Distinguished Professor and Department Head
Pennsylvania State University

Leading Advanced Turbine Research for Hybrid Electric Propulsion Systems

Sponsor: NASA-University Leadership Initiative

Award Amount: \$8,000,000

2021-25 (Four Years)

Novel Hot Gas Path Components for Gas Turbine Engines Enabled by Materials Development

Sponsor: Department of Energy-Oak Ridge National Lab

Total amount: \$333,034

2020 (Three Years)

Combustor Wall Cooling with Dirt Mitigation

Sponsor: FAA ASCENT Program

Total amount: \$1,500,000 (plus \$450,000 cost match from Pratt & Whitney)

2020-22 (Three Years)

Turbine Cooling through Additive Manufacturing

Sponsor: FAA ASCENT Program

Total amount: \$1,200,000 (plus \$1,200,000 cost match from Pratt & Whitney)

2020-22 (Three Years)

Improving Turbine Efficiencies through Heat Transfer and Aerodynamic Research in the Steady Thermal Aero Research Turbine (START) – National Experimental Turbine (NExT)

Sponsor: Department of Energy-National Energy Technology Lab

Total amount: \$11,067,120

2015-20 (Five Years)

Integration of Sensors through Additive Manufacturing Leading to Increased Efficiencies of Gas turbines for Power Generation and Propulsion

Sponsor: Advanced Research Projects Agency-Energy-Open Solicitation

Total amount: \$5,879,897

2019-22 (Three Years)

Integrated turbine component cooling designs facilitated by additive manufacturing and optimization

Sponsor: Department of Energy-National Energy Technology Lab: University Turbine Research Program

Total amount: \$400,000

2019-22 (Three Years)

Gas Turbine Fuel Reduction through Minimally Cooled Vanes and Blades

Sponsor: FAA CLEEN 2 Program / United Technologies Corporation-Pratt & Whitney

Total amount: \$2,631,460

2015-19 (Four Years)

Characterization of Single Hole and Multi-Row Heat Transfer Relevant to Combustor Liners

Sponsor: Pratt & Whitney

Total Amount: \$271,500

2019-20 (two years)

Internal Flow Testing for Future Turbine Components

Sponsor: Pratt & Whitney

Total Amount: \$509,247

2019-20 (two years)

Thermal Performance of Advanced Cooling Channel Concepts

Sponsor: Pratt & Whitney

Total Amount: \$331,822

2019-20 (two years)

Film Cooling Testing for Future Turbine Components

Sponsor: Pratt & Whitney

Total Amount: \$166,642

2019 (one year)

Characterizing Coke Deposition in Additively Manufactured Parts

Sponsor: Air Force Research Laboratory (with Reaction Systems)

Total Amount: \$56,000

2019-20 (one year)

Conjugate Heat Transfer for LES of Gas Turbine Engines

Sponsor: U.S. Navy STTR Program (with Cascade Technologies)

Total Amount: \$330,000

2019-21 (three years)

Characterization of Additively Manufactured Channels

Sponsor: Siemens Energy

Total Amount: \$275,000

2018-20 (three years)

Testing and Characterization of an Additively Manufactured Tip Shoe and Combustor Liner

Sponsor: Solar Turbines

Total Amount: \$255,021

2019 (1.5 years)

START Turbine Upgrade
Sponsor: Pratt & Whitney
Total Amount: \$64,645
2019 (one year)

Smooth Wall TOBI and Baseline
Sponsor: Pratt & Whitney
Total Amount: \$215,000
2018 (one year)

Dirt Ingestion Studies for Turbine Components
Sponsor: Pratt & Whitney
Total Amount: \$130,000
2018 (one year)

Scalable Predictive Analytics for Real-Time Life Predictions of Critical Gas Turbine Components
Sponsor: Department of Energy – University Turbine Systems Research Program
Total Amount: \$700,000
2018 (three years)

EAGER: Identifying and Disseminating Transformative Professional Development of STEM Undergraduates Who Perform Outreach
National Science Foundation
Total amount: \$299,999
2017-2020 (3 years)

IN-KIND SUPPORT TO PENN STATE FOR RESEARCH SUPPORT-EXTERNAL

START Support
Sponsor: Pratt & Whitney
Total amount: \$100,000
2020

START Support
Sponsor: Pratt & Whitney
Total amount: \$200,000
2019

START II Support
Sponsor: Pratt & Whitney
Total amount: \$200,000
2018