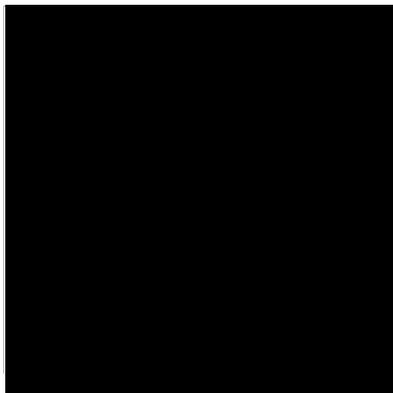


Committee on Energy and Commerce
U.S. House of Representatives

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

1. Your Name: Charles Hookham, PE		
2. Your Title: Past Director		
3. The Entity(ies) You are Representing: American Society of Civil Engineers (ASCE)		
4. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No X
5. 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. None		
6. Please attach your curriculum vitae to your completed disclosure form. Attached		

Signature:



Date: March 10, 2017

Charles J. (“Chuck”) Hookham, P.E.

➤ PROFESSIONAL SUMMARY

Mr. Hookham has experience on a variety of new infrastructure, power generation, transmission, repowering, water, wastewater, tar sands recovery and processing, natural gas pipeline, hydropower, refining, and process industry projects ranging from permitting, development, and site studies through engineering, construction and commissioning. He has managed full-scale EPC activities on major industrial, simple/combined cycle, and air quality control projects throughout the Americas. He has also served as owner’s engineer to utility and developer management teams and been extensively involved in capital cost estimation, contract negotiations, and risk assessment. More recently, he has been active in aging infrastructure upgrades and topics including rate impacts, ISO-based dispatch changes, integration of renewable energy/energy storage systems, and environmental regulations. Operationally, he has been responsible for staffs of up to 200 people, profit and loss, and strategic planning. Since early in his career, he has led teams in operations, process improvement, business development, and quality functions.

➤ PROJECT EXPERIENCE AND SKILLS (*RECENT SAMPLING*)

A. CMS Energy (March, 2016 to Present)

Technical and financial leadership on multiple projects including large combined heat and energy (CHP), renewable energy (hydro, wind, solar PV), and power/natural gas distribution upgrades for primarily larger commercial and industrial (C&I) customers of Consumers Energy. Technical support on multiple CMS Enterprises projects including solar PV and landfill gas to energy acquisitions. Participated in industry groups (e.g., Edison Energy Institute) and provided technical support to integrated resource planning (IRP) efforts.

B. Pre-CMS Energy Experience (over 35 years – see Experience Summary)

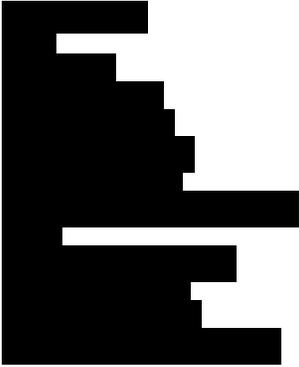
Exelon Generation, Harmattan Energy Center (2x0 80 MW) Calgary, Alberta and West Medway Station (2x0 100 MW), Massachusetts. Owner’s Engineer. Full-scale development, preliminary engineering, and permit support for a 90 MW gas-fired peaking project located in Calgary with mid 2018 in-service date (on hold), West Medway project (2019 in-service, Massachusetts), and multiple storage projects in PJM.

UGI Energy, Process Hazards Analysis (PHA) of Generation and Midstream Gas Facilities. Project Director. Completed PHA work and developed risk mitigation recommendations for a combined cycle power plant, landfill gas to energy plant, propane-air peaking plant, and natural gas compressor station.

DTE Energy, Multiple Simple and Combined Cycle Generating Plants. Project Executive. Technical support for the development and preparation of proposals for gas-fired simple and combined cycle power generating projects utilizing aeroderivative and frame-based combustion turbines located in the southern and western United States (Energy Services). Consultant to DTE integrated resource plan (IRP) development.

Interstate Power and Light, Marshalltown Generating Station (2x1 Combined Cycle Project), Marshalltown, IA. Owner’s Engineer. Responsible for technical, commercial, and permitting assistance in the development of an advanced F-class combined cycle plant with 650 MW summer capacity and is currently under construction with April, 2017 commercial operating date.

Multiple National Assignments/Owners. Project Director. Responsible for technical, commercial, and permitting assistance on energy storage, run-of-river and pumped hydroelectric, and remote natural gas fired generation in Texas, Alaska, California, and Alberta. Provided written testimony for the Certificate of Necessity filings and permits, and negotiated generator interconnect application and contracts.



Education

Post-Graduate Coursework in Power Conversion and Conventional and Renewable Energy Systems, Engineering, and Interdisciplinary Technology

Master of Business Administration (MBA), International Finance, Eastern Michigan University

Bachelor of Science, Civil Engineering, University of Illinois, Urbana-Champaign

Professional Registrations

National Council of Examiners for Engineering and Surveying, No. 11031

Professional Engineer, Florida, No. 55602

Professional Engineer, Illinois, No. 062.049060 (*inactive*)

Professional Engineer, Michigan, No. 6201034897

Professional Affiliations and Appointments

- Association of Energy Engineers (AEE)
- American Society of Civil Engineers (ASCE), Appointed to Founders Society Committee on Carbon/GHG Management (2009), ASCE Board Committee on Critical Infrastructure (2009), and ASCE Policy Committee on Environment, Energy and Water Quality Issues (2010)
- Elected to ASCE Nat’l. Board of Direction (2013) as At-Large Director
- ASCE Board Committee on America’s Infrastructure (2017 Report Card)
- Member of MREP Bioenergy Committee (2011) and YpsiSolar Group
- ASCE Structural Engineering Institute
- NCEES Technology Task Force, Impacts of Technology on Engineering Practice (2016-2017)

Other Appointments

Appointed by Gov. Rick Snyder to Four-Year Term on State of Michigan Board of Professional Engineers (2014)

Other Appointments (cont'd)

Appointed to Energy Commission, Ann Arbor City Council (over 7 years service); volunteer on many City and local energy events; co-author of City Sustainability and Climate Action Plans

Washtenaw County Board of Commissioners, *Appointment to Building Code/Construction Board of Appeals*

Associate Editor, *ASCE Journal of Energy Engineering*

Board of Trustees, *ASCE Foundation*

Industry Tenure

36 Years

Professional Awards

Stephen Bechtel Jr. Energy Award (2014), ASCE

Other Qualifications

PMP Qualified

Envision™ SP Qualified

Former Level III NDE Examiner

Papers and Presentations

Over sixteen authored papers and presentations at technical conferences and seminars, on energy systems, power generation, and facility aging management. Invited panelist at 2011 PowerGen Financial Forum (Gas Technology Risks) and 2013 Michigan Energy Forum, judge at 2013-2014 and 2014-2015 University of Michigan Ross Renewable Energy Case Competitions; featured speaker at Michigan Infrastructure Conference (2014) and Civil Engineering Triennial Summit in London (2015)

Alliant Energy, Wisconsin Power Alternatives Study and Strategic Consulting.

Consultant. Study of potential natural gas, CHP, and renewable energy-based generation technologies and location assessments for Alliant's WPL subsidiary in its service territory, including combined cycle conversion of several simple cycle 7FA CT/G sites, other gas-fired generation, renewables, and biomass fired generation options. Examined technical/financial capabilities relative to expected system demand and distribution in future years. Development of CPCN, air permit, and other prerequisite tasks for what is now termed Riverside Generating Station Expansion project (2x1 F-class NGCC).

TransCanada, Oakville Generating Station, Oakville, Ontario. Project Principal. Responsible for supporting TransCanada's development of a 2x1 advanced G-class combined cycle project and, after award, initiation of detailed design and procurement activities in early 2010. The Station was nominally rated at 970 MW net generation across all four seasons with degradation when firing high pressure gas. Secured one of the largest privately funded contracts for HDR at the time. This project was cancelled partway through detailed design in 2010 (*now Napanee GS*).

Seminole Electric Cooperative, Payne Creek Generating Station, Florida. Project and Engineering Manager. Led the design, procurement and construction of an advanced Siemens F-class, 2x1 combined cycle project that included interconnection of two major natural gas supplies, fuel oil firing, and 230 kV substation and transmission line interconnection to a nearby substation. Supported construction, startup/commissioning, performance testing, and turnover activities. Project also integrated gas supplies from two major pipeline utilities, allowing start-of-market client hedging.

Ameren, Venice Generating Station Units 3, 4, and 5, Illinois. Project Manager. Responsible for the delivery of two F-class and one E-class combustion turbine/generators at the Venice Station under engineering, procurement, and construction management (EPCM) contracts, with full responsibility for startup/commissioning and system turnover. Responsible for implementing a startup reliability task force for the F-class units which led to no trips or significant runbacks prior to commercial operation. Completed a combined cycle conversion study for Units 3 and 4. All projects were completed on-time and under budget, with successful commissioning.

Expert Witness Support, Multiple Utilities, New Generation and Transmission Need and Siting. Project Principal. Provided written and oral testimony on behalf of utilities and in support of Public Service Commission proceedings regarding new projects, on topics including new project prudence, validity of capital costs, alternative generation analysis, IRP conclusions, and carbon capture and sequestration.

CMS Generation, Lujan de Cuyo Unit 12 Repowering, Mendoza, Argentina. Engineering Manager. Led the engineering design and procurement/construction/startup support efforts for an F-class, 1x1 repowering of an existing 125 MW steam turbine/generator in Argentina, addressing challenges including remote project location, degraded existing plant, high seismicity, and integration of a new generation, foreign CT/G with an existing, 1960's vintage ST/G. Project was completed under budget and performance testing and commissioning met the project schedule.

Confidential Developer Client, Conceptual Design, Permitting and Development of 40 MW Biomass Power Generating Plant (Michigan). Project Director. Detailed study, conceptual design, environmental permitting, and development of a 40 MW biomass generating plant. The project acquired generator interconnection approval, air permit, and site approval but was ultimately cancelled as a result of financing difficulties.

Cirque Energy, Biomass Gasification Project (Midland Power Station, Michigan). Project Manager (Development/Engineering). Responsible for the conceptual design and technical development of a multi-fuel biomass gasification power generating plant in Michigan. Work included site characterization, geotechnical exploration, design,

environmental permit support, capital cost/schedule development, and others. The project received a power purchase agreement but could not reach financial close.

Barton Malow, Garden and Stoney Corners (Phases 1, 2, and 3) Wind Farms. Project Manager. Engineering design of civil and structural systems and foundations for multiple 2 MW wind turbine/generators manufactured by REpower and Northern Power Systems in the State of Michigan for Heritage Sustainable Energy and Barton Malow. Technical support of wind turbine site selection and collector system interfaces (2009) and construction. Both projects have exceeded capacity factor and Owner expectations.

Confidential Utility Client, Energy Storage System, 120 MW/60 MWh Capacity, EPC Delivery. Proposed Project Director. Led development of a turnkey EPC proposal for a large lithium-ion battery-based energy storage system with two 138 kV grid connections and balance-of-plant work, to support frequency and voltage stability challenges on an existing grid. HDR team was short-listed/interviewed but owner selected a different project delivery configuration.

Interstate Power and Light (Alliant Energy), Sutherland Generating Station, Conversion of Three Oil-Fired CTGs to Natural Gas. Project Manager. Detailed study, conceptual design, environmental permitting, and development of a fuel conversion program associated with three existing Pratt & Whitney FT4 CTGs. Project is under construction with 2016 completion date planned (EPC delivery).

Snohomish PUD, Hardeson Substation, Energy 1 Systems, Energy Storage System Design Review. Staff Engineer. Conducted technical review of lithium ion battery, power conversion system, and balance of plant design and construction documents on behalf of the PUD as Owner's Engineer.

Confidential Mining Client, Mine and Port Site Power and Energy Systems Development. Consultant. Led team that developed gas-fired combined cycle energy, renewable energy, and energy storage options to deliver high-reliability power and heating to remote off-grid mining and port sites in Alaska. Solutions included natural gas (pipeline and gasified LNG), wind, and pumped hydro and battery-based storage.

Entergy, GBA 2x1 (Buenos Aires, Argentina) and Jundiá 3x1 (Campinas, Brazil) Combined Cycle Projects. Engineering Manager. Responsible for the conceptual design and technical development of two large 3x1 F-class combined cycle projects in South America. Work included site characterization and geotechnical exploration, conceptual design, environmental permit support, capital cost/schedule development, and other development activities. These projects ultimately did not receive power purchase agreements and were not executed.

Holland Energy Park, City of Holland, MI. Owner's Engineer. Supported the development of new generation for City of Holland, which evolved from a coal-fired generator into a 2x1 gas-fired combined cycle plant under construction with 2016 COD.

Arbor Brewing, Ypsilanti Food Cooperative, and Confidential Clients (Multiple), Rooftop and Ground-Mount Solar PV Installations (Michigan). Project/Engineering Manager. Design and construction support for multiple utility grid-connected solar PV arrays located throughout Southeast Michigan.

➤ **PROFESSIONAL EXPERIENCE SUMMARY (Ending Position noted)**

2016 to Present – CMS Energy (Director, New Business Development and Projects)
2006 to 2016 – HDR, Inc. (Vice President, Officer, Director of Projects)
1992 to 2006 – Black & Veatch (Associate Vice President, Project Manager)
1984 to 1992 – Multiple Dynamics Corporation/Detroit Edison (Project Manager)
1981 to 1984 – Bechtel Power Corporation (Senior Engineer)