

EB-2021-0246 : 1 : Tamara Kuiken		
COST CLAIM NUMBER 562	SUBMISSION DEADLINE DATE July 21, 2022	CLAIM STATUS Approved by Finance
EB# EB-2021-0246: Initiatives: Policy Dev, Infrastructure and Supply: Ontario Energy Board	OTHER EB#S	PHASE #* 1
INTERVENOR Kuiken, Tamara; +1 (608) 466-0400 tamara.kuiken@dnv.com	INTERVENOR COMPANY* DNV, Madison: Corporation	INTERVENOR TYPE Full Registrant
HST RATE ONTARIO 13.00	EXCHANGE RATE	COUNTRY US
HST NUMBER 75645 4070 RT0001	LATE SUBMISSION ALLOWED No	EXTENSION DEADLINE DATE

PARTICIPANTS

New	Non-Filing Participant First, Last Name	Filing Participant	Participant Total (\$)	Claim Status
No	,	Kuiken, Tamara; +1 (608) 466-0400 tamara.kuiken@dnv.com	8,763.15	Submitted

ATTACHMENTS

Attachment	Attachment Date	Participant	Document Type	Claim Type	Import Message
CV_Kuiken.pdf					
Invoice Kuiken.pdf					
DNV EB-2021-0246 Cost Claim 072120221325.pdf					
3-ChequePayableTo-RE_ DNV Madison Corporation Cost Claim EB-2021-0246.pdf					Email Confirmation for Cheque Payable to Revision
3-DNV 10328951 inv#_870010188249.pdf			Invoice		

TOTAL LEGAL/CONSULTANT/OTHER FEES 7,755.00	TOTAL DISBURSEMENTS 0.00	TOTAL HST 1,008.15
TOTAL CLAIM 8,763.15	TOTAL AMOUNT AWARDED	
REASON FOR DISALLOWANCE	REASON FOR DISALLOWANCE - 2	REASON FOR DISALLOWANCE - 3

MAKE CHEQUE PAYABLE TO
DNV Energy Insights USA, Inc.

SEND PAYMENT TO ADDRESS
5202 Paysphere Circle
Chicago, IL
60674

ATTENTION

SUBMIT SECTION
I am a representative of the Party. I have examined all of the documentation in support of this cost claim. The costs incurred and time spent are directly related to the Party's participation in the OEB Process referred to above.

This cost claim does not include any costs for work done, or time spent, by a person that is an employee or officer of the Party as described in section 6.05 and 6.09 of the OEB's Practice Direction on Cost Awards.

The information (fees and disbursements) filed in this cost claim is complete and accurate and in accordance with the OEB's Practice Direction for Cost Awards and Appendix A, the Cost Awards Tariff.

SUBMITTED BY
Tamara Kuiken

DATE SUBMITTED
July 21, 2022

Tamara Kuiken

CASE	COST CLAIM	INTERVENOR NAME	PARTICIPANT CLAIM STATUS
EB-2021-0246: Initiatives: Policy Dev, Infrastructure and Supply: Ontario Energy Board	EB-2021-0246 : 1 : Tamara Kuiken	Kuiken, Tamara; +1 (608) 466-0400 tamara.kuiken@dnv.com	Submitted

FILING PARTICIPANT	NEW PARTICIPANT	NON-FILING PARTICIPANT F. NAME	NON-FILING PARTICIPANT L. NAME
Kuiken, Tamara; +1 (608) 466-0400 tamara.kuiken@dnv.com	No		

SERVICE PROVIDER TYPE	YEAR CALLED TO BAR	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE	HOURLY RATE
Consultant		20	330

CV STATUS (FOR CONSULTANT/ANALYST)	LAST CV DATE	HST RATE CHARGED
CV Attached	July 21, 2022	13.00

HEARINGS	CONSULTATIONS	DISBURSEMENTS
No	Yes	No

CONSULTATION

<u>Description</u>	<u>Maximum Hours</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
Consultation							
Meeting #1 - January 18, 2022	4.00	4.00	330	1,320.00	13.00	171.60	1,491.60
Meeting #2 - February 15, 2022	4.00	4.00	330	1,320.00	13.00	171.60	1,491.60
Meeting #3 - March 22, 2022	4.00	4.00	330	1,320.00	13.00	171.60	1,491.60
Meeting #4 - April 26, 2022	4.00	4.00	330	1,320.00	13.00	171.60	1,491.60
Meeting #5 - May 24, 2022	4.00	2.00	330	660.00	13.00	85.80	745.80
Review/Comments on Enbridge Gas Annual IRP Report and Working Group Report	4.00	2.50	330	825.00	13.00	107.25	932.25
Meeting #6 - June 21, 2022	4.00	3.00	330	990.00	13.00	128.70	1,118.70
Consultation Total							
Total Legal/Consultant Fees				7,755.00		1,008.15	8,763.15

Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
CV.pdf	CV	
Time Docket Kuiken.pdf	Time Docket	
OEB_IRP Working Group	Other	
Membership_20211206.pdf		
Invoice Kuiken.pdf	Invoice	
CV_Kuiken.pdf	CV	

Attachments

General Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
CV.pdf		

Hearings, Consultations, Disbursements Attachments

<u>Attachment</u>	<u>Related Disbursement Claim</u>	<u>Document Type</u>	<u>Claim Type</u>	<u>Import Message</u>
CV.pdf		CV	Consultations	
Time Docket Kuiken.pdf		Time Docket	Consultations	
OEB_IRP Working Group		Other	Consultations	
Membership_20211206.pdf				
Invoice Kuiken.pdf		Invoice	Consultations	
CV_Kuiken.pdf		CV	Consultations	

January 18, 2022	0.5 hours	Meeting #1	Review meeting materials
January 18, 2022	2 hours	Meeting #1	Attend meeting
February 14, 2022	3 hours	N/A – general background research	Read D&O and Framework; notes
February 15, 2022	0.5 hours	Meeting #2	Review meeting materials
February 15, 2022	2 hours	Meeting #2	Attend meeting
February 21, 2022	7 hours	N/A – general background research	Read D&O and Framework; notes
March 22, 2022	2 hours	Meeting #3	Attend meeting and review materials
April 11, 2022	1.5 hours	N/A – IRP report	Review and comment on draft report
April 26, 2022	2 hours	Meeting #4	Attend meeting
May 30, 2022	1 hour	N/A – IRP report	Review and comment on draft report
June 21, 2022	2 hours	Meeting #6	Attend meeting



CURRICULUM VITAE

Tamara Kuiken

Head of Department, Engineering and Technology

Current position

Tamara Kuiken, P.E., is Vice President of DNV GL Energy Insights, overseeing nearly 40 engineers, data scientists, and market research professionals. Ms. Kuiken has 20 years of experience in energy estimation, energy efficiency program evaluation, cost effectiveness analysis, and end-use load monitoring in support of regulatory activities, resource planning, energy efficiency evaluation, and demand-side management initiatives. She has contributed to and directed studies in all sectors, including the governmental, commercial/industrial, residential, low income, agriculture, and institutional sectors. Ms. Kuiken works as a subject matter expert and manager or sponsor on projects. She is responsible for developing work plans; overseeing data management, sample design, data collection, engineering analysis, and statistical expansion; writing reports; and stakeholder communication. Her engineering background provides a strong foundation for the evaluation of large commercial and industrial projects with complex custom installations. She has extensive net-to-gross experience gained across a wide variety of jurisdictions and program types. Much of Ms. Kuiken's work has focused on collaboration and effective communication. Energy efficiency rightfully attracts attention from many sectors and stakeholder groups because it is often a component of public policy funded through municipalities or regulation. Ms. Kuiken is adept at understanding different industry perspectives and providing the context around issues, allowing all sides to make informed decisions. Ms. Kuiken specializes in explaining complex industry issues and their impacts on policy and energy efficiency implementation. She also has extensive experience in working across industry groups, collaborating and engaging with stakeholders in multiple markets and jurisdictions.

Languages

Language	Native	Speaking	Reading	Writing
English	✓	High	High	High

Education

Field of expertise	University/School	Year
Master of Science, Mechanical Engineering	Iowa State University	May 2002
Bachelor of Science, Mechanical Engineering	Iowa State University	May 1999

Summary of professional experience

Tamara Kuiken, P.E., is Vice President of DNV GL Energy Insights, overseeing nearly 40 engineers, data scientists, and market research professionals. She has 20 years of experience in energy estimation, energy efficiency program evaluation, cost effectiveness analysis, and end-use load monitoring in support of regulatory activities, resource planning, energy efficiency evaluation, and demand-side management initiatives. Ms. Kuiken has contributed to and directed studies in all sectors, including the governmental, commercial/industrial, residential, low income, agriculture, and institutional sectors.

Ms. Kuiken works as a subject matter expert and manager or sponsor on projects. She is responsible for developing work plans; overseeing data management, sample design, data collection, engineering analysis, and statistical expansion; writing reports; and stakeholder communications. Her engineering background provides a strong foundation for the evaluation of large commercial and industrial projects with complex custom installations. She has extensive net-to-gross experience gained across a wide variety of jurisdictions

Summary of professional experience

and program types.

Much of her work has focused on collaboration and effective communication. Ms. Kuiken is adept at understanding different industry perspectives and providing the context around issues, allowing all sides to make informed decisions. She has extensive experience in working across industry groups, collaborating with and engaging stakeholders in multiple markets. She also specializes in explaining complex industry issues and their impacts on policy and energy efficiency implementation.

Employment

DNV GL		Jul 2003 - Present
Position:	Vice President	
Description:		
Nexant, Inc.		May 2002 - Jul 2003
Industrial Assessment Center		May 1999 - May 2003
Description:	Iowa State University	

Projects

Dominion Energy, Dominion Virginia Power		May 2015 - Mar 2024
Position:	Project Sponsor	
Description:	DNV delivers comprehensive, multi-year evaluation, measurement, and verification (EM&V) services to Dominion Energy for its DSM program portfolios in Virginia and North Carolina. We currently evaluate 27 different programs.	

DNV works collaboratively with Dominion Energy's program designers, multiple implementers, integrated resource planners (IRP), and energy supply team to integrate EM&V needs and results into all DSM program cycle stages. We estimate energy and demand savings (using tracking data), define data requirements, identify key data gaps, and develop EM&V plans. DNV develops detailed saving calculations algorithms for measures documented in the technical reference manual that we maintain and update annually for Dominion Energy. We then work closely with Dominion Energy's program staff to define the required and optional data fields and to balance practical implementer data collection considerations with improved calculation rigor. At the program cycle's back end, we use study results to improve program implementation, improve IRPs (with program load shapes developed using measured and verified data), support energy efficiency and demand reduction program bids into PJM, and calculate savings to recover lost revenue and set base rates in North Carolina and Virginia (where we help set base rates only).

DNV's support includes developing engineering protocols, managing data quality standards, tracking program savings, collecting field and survey data, providing annual EM&V reporting, supporting the stakeholder process, estimating lost revenue, and supplying expert testimony. Early in the process, we worked with program managers to develop Standard Engineering and Tracking Protocols (STEPS) to estimate energy and demand savings using program and participant tracking data, to define data tracking requirements for EM&V processes, to key identify data gaps, and to develop EM&V plans.

Ms. Kuiken is the project sponsor for this portfolio.

Projects

DNV GL, Ontario Energy Board		Mar 2016 - Dec 2022
Position:	Project Manager/Sponsor	
Description:	<p>□ Ms. Kuiken is managing DNV GL's engagement as the Ontario Energy Board's (OEB) Evaluation Contractor. DNV GL directs evaluation planning, policy, and execution for the Natural Gas Demand-Side Management programs on behalf of the OEB. We oversee evaluation studies implemented by other contractors, directing them on methodology, execution, and reporting. We conduct primary evaluation on the portfolio of programs by reviewing documentation, verifying energy savings estimates, and applying the results of previously conducted studies. We provide opinions on the shareholder incentive and lost revenue amounts due to the implementing utilities and calculate program-level and portfolio-level cost effectiveness. DNV GL also solicits input from the Evaluation Advisory Committee (made up of representatives from provincial government, ratepayer advocacy groups, the utilities, and the OEB) on the evaluation industry best practices and gathers input to inform evaluation policy and implementation. Ms. Kuiken's primary role is to facilitate communication between the evaluation teams and EAC and oversee reporting and evaluation activities. Ms. Kuiken is the project sponsor of DNV GL's implementation of the OEB's custom project savings verification, spillover, and free ridership studies. For these projects, DNV GL studies a sample of commercial and industrial custom projects implemented by the two natural gas utilities in Ontario. For a sample of projects, DNV GL collects data on project operation, equipment efficiency, project influence, and additional energy savings measures implemented and expands the results to the population to estimate a gross realization rate, free ridership rate, and spillover rate resulting from custom projects. Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the EAC.</p>	
New Hampshire Program Administrators, New Hampshire Non-energy Impacts		Oct 2020
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's non-energy impact analysis for the New Hampshire utilities' prescriptive energy efficiency programs. DNV GL conducted a review of literature to identify and quantify the non-energy impacts associated with the measures. We also developed a database of each measure, the type of impact, and our relative confidence in the quantified result. Ms. Kuiken conducted quality control for the project deliverables and contributed to communication between the project manager and the client.</p>	
Massachusetts Cross-Cutting NEI Study		Aug 2019
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's studies on commercial and industrial (C&I) non-energy impacts (NEI) for the Massachusetts Program Administrators (PAs). DNV GL conducts secondary source research, interviews program and utility staff, and develops work plans for studying C&I NEIs with input from the Massachusetts PAs and other stakeholders. In coming years, DNV GL will conduct market research with participants and vendors and collect data to determine estimates of NEIs for program measures. Ms. Kuiken conducts quality control on the project deliverables and contributes subject matter expertise to the scoping and strategy discussions.</p>	
AEP Ohio		Nov 2017 - Oct 2018
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for AEP Ohio's commercial and industrial energy efficiency program. DNV GL estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 200 measures offered by the AEP Ohio program. We also collected data from industrial clients to analyze the non-energy impacts associated with production or revenue changes associated with different energy efficiency measures. Finally, we conducted a review of the non-energy impact literature to identify less tangible non-energy impacts. Ms. Kuiken conducted quality control on the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>	
Independent Electric System Operator, Independent Electric System Operator of Ontario		Jul 2019 - Jul 2018
Position:	Project Manager	

Projects

Description:	Ms. Kuiken was the project manager for DNV GL's engagement with the Independent Electric System Operator (IESO) in Ontario to develop an innovation roadmap. DNV GL participated in IESO strategy meetings, facilitating group discussions and assembling input into a draft roadmap for public engagement. We also conducted a jurisdictional scan of innovation in multiple jurisdictions globally, and facilitated focus groups with academic, industry, and customer representatives to gather feedback on the draft roadmap. Ms. Kuiken was the primary contact between the IESO and project team, led the focus groups, and assembled the focus group results into a feedback memo.
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Consumers Energy

Jul 2017 - Mar 2018

Position:	Project Sponsor
Description:	<p>□ Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for Consumers Energy commercial and industrial energy efficiency program. DNV GL conducted a review of non-energy impact literature, produced 10 non-energy impact case studies, and estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 70 measures offered by the Consumers program. The work was assembled into program marketing materials to help customers understand the full benefit associated with energy efficiency measures. Ms. Kuiken conducted quality control of the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>

DNV GL, National Grid and Con Edison

Mar 2015 - Feb 2018

Position:	Project Manager
Description:	<p>□ Ms. Kuiken managed the New York Residential Appliance Metering study contracted through National Grid and Con Edison in New York. The project studied non-intrusive load monitoring (NILM) equipment and its ability to gather data and disaggregate it into individual residential end-use load shapes. In addition to directing procurement, installation, data collection, and analysis, Ms. Kuiken facilitated communication across the NY IOUs, NY ISO, NYSEDA, and the NY Department of Public Service.</p>

DNV GL, California Public Utility Commission HVAC Testing

Feb 2015 - Oct 2017

Position:	Project Manager
Description:	<p>Ms. Kuiken managed a laboratory project that tested residential and commercial packaged HVAC systems under a variety of maintenance faults to determine their impact on unit capacity and efficiency. The study reviewed typical maintenance faults such as condenser and evaporator coil blockages, refrigerant under-and over-charge, changes in airflow, and fixed economizer positioning under a number of simulated outdoor conditions. In her role as manager, Ms. Kuiken was responsible for coordinating with a number of stakeholder groups to determine the laboratory test plan. She then implemented the test using a third party provider, assist with interpreting the results, and wrote a report of the findings.</p>

Ontario Energy Board, Ontario Energy Board

Mar 2014 - Jan 2017

Position:	Project Sponsor
Description:	<p>Ontario Energy Board (OEB) Gas Program Evaluation, 2014-present. DNV GL is evaluating Union and Enbridge Gas's commercial and industrial custom programs on behalf of the Ontario Energy Board. The commercial and industrial (C&I) and multi-family custom programs include a full range of custom gas measures, including equipment replacement, retro-commissioning, repair, operations and maintenance (O&M), and a large customer self-direct program. The evaluation has collected data from four years of program participants, produced verification and free-ridership and spillover ratios applicable to the utilities programs.</p>
Activities performed:	<p>Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the Evaluation Advisory Committee.</p>

We Energies

Sep 2013 - Mar 2015

Position:	Project Manager
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Projects

Description: □ Ms. Kuiken managed the DNV GL evaluation of the We Energies' Residential Assistance Program. Ms. Kuiken developed the evaluation work plan, facilitating input from We Energies, participating trade allies, and the Public Service Commission of Wisconsin. Ms. Kuiken also managed the data collection, documentation review, analysis, and reporting.

DNV GL, Oak Ridge National Laboratory

Jan 2012 - Jan 2015

Position: Team Member

Description: Energy Efficiency Community Block Grant: Ms. Kuiken managed the impact evaluation of the Energy Efficiency Community Block Grant for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken managed the verified savings calculations of 260 grants offered across the country and contributed to the attribution analysis methodology. State Energy Program: Ms. Kuiken managed the DNV GL portion of the Nonresidential Retrofit State Energy Program evaluation for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken directed the documentation requests, telephone and on-site data collection, analysis, and reporting for 13 programs offered in states across the country and contributed to the attribution analysis methodology.

DNV GL, Con Edison

Jan 2012 - May 2014

Position: Project Manager

Description: Ms. Kuiken managed the impact evaluation of the Small Business Direct Install program for Con Edison and Orange and Rockland utilities in New York. The study called for a billing analysis of participating businesses and more than 250 site visits to verify installation and meter operating hours. Ms. Kuiken also oversaw the development of attribution adjustment factors and net savings estimates for the program.

DNV GL, Michigan Electric Cooperative Association

Mar 2010 - Apr 2014

Position: Project Manager

Description: Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed four rounds of impact evaluation of the Energy Optimization Programs for a consortium of utilities in Michigan. Programs included residential new construction, ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. In the first three rounds, Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings. In the final year, Ms. Kuiken directed the audit and certification of the program tracking database and savings reports.

DNV GL, Alliant Energy - IPL

May 2005 - Oct 2013

Position: Project Manager

Description: Ms. Kuiken managed the process and impact evaluations of the 2009 – 2013 Energy Efficiency Plan and directed the evaluation of the PowerHouse television program for Alliant Energy in Iowa. The Energy Efficiency Plan programs included residential, nonresidential, and agriculture prescriptive; appliance recycling; direct load control; nonresidential custom; low income; home energy audits; renewable; and various educational and other programs. Ms. Kuiken managed study design, oversaw sample design and data collection, coordinated impact analyses, and incorporated process and impact evaluation results into a program-level report. She organized and managed the simultaneous evaluation of 20 distinct programs and oversaw client presentations, final report production, and additional scope and study requests. For the PowerHouse evaluation, Ms. Kuiken directed study design, oversaw sample design and data collection, and directed and reviewed the modeling results. Ms. Kuiken also participated in the 2005-2006 evaluation of the Alliant Energy efficiency and direct load control programs in Iowa and evaluated the energy savings estimates and algorithms used for the Agricultural Prescriptive Program in 2007.

DNV GL, Michigan Community Action Agency Association

Mar 2010 - Apr 2013

Position: Project Manager

Projects

Description: Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed the evaluation of the Efficiency United statewide energy efficiency program in Michigan for 3 years. Programs included ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings.

DNV GL, Alliant Energy - WPL

Oct 2009 - Aug 2011

Position: Project Manager

Description: Ms. Kuiken managed the impact evaluation of the Alliant Energy Shared Savings Program in Wisconsin in 2009 and 2010. She oversaw telephone and on-site data collection for energy efficiency measures installed in the commercial and industrial sectors and monitored data analysis to determine net program savings. She also coordinated study efforts with the evaluation of the Focus on Energy Program.

DNV GL, Public Service Commission of Wisconsin

Jul 2003 - Jun 2011

Position: Project Manager

Description: Ms. Kuiken managed the evaluation of the Focus on Energy Business Programs statewide public benefits program in Wisconsin in 2010. The evaluation included an impact evaluation and a study of the savings resulting from the Education and Training program. She also participated in past evaluations of this program (since 2003), which included deemed savings review, a lighting supply-side study, a measure life study, an incremental cost study, and research into net-to-gross approaches and analysis methods. Ms. Kuiken managed the impact evaluation of the Focus on Energy Renewables Program statewide public benefits program from 2003-2008. She oversaw sample design, collected data from program participants, estimated gross energy savings resulting from implemented projects, and analyzed survey data to determine net savings.

DNV GL, Vectren Natural Gas, Indiana

Jan 2009 - Nov 2009

Position: Project Manager

Description: Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of the Indiana prescriptive and custom natural gas programs in the Vectren service territory. She oversaw data acquisition and sample design, developed survey instruments, and managed data collection and survey delivery. She also directed data analysis and the development of adjustment factors to determine net program savings.

DNV GL, San Diego Gas and Electric

Mar 2009 - Oct 2009

Position: Project Manager

Description: Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of a commercial load control program in Southern California. She developed a system to recruit 400 participants for evaluation, developed onsite protocols, specified measurement equipment, trained field staff, and implemented quality control. She oversaw the installation and removal of meters on commercial air conditioning equipment.

DNV GL, New Jersey Board of Public Utilities

May 2007 - Oct 2009

Position: Team Member

Description: Ms. Kuiken was a task manager for DNV GL's 2007 to 2009 evaluation of the Smart Start commercial and industrial energy efficiency program in New Jersey. She oversaw assembly of data from 7 different utilities, assisted with sample design, oversaw verification of energy savings, and managed the review and update of statewide deemed savings protocols.

DNV GL, Pacific Gas and Electric

Apr 2004 - Apr 2009

Position: Team Member

Projects

Description: Ms. Kuiken was the task manager for DNV GL's 2007/2008 evaluation of a pilot load control program in Northern California. She developed a system to recruit 550 participants for evaluation, produced onsite protocols, hired temporary employees, trained field staff, and implemented quality control. She oversaw the installation of nearly 670 meters on residential air conditioners within a 6 week period and monitored the removal of all meters in a 2 week period. Ms. Kuiken participated in DNV GL's 2004 evaluation of the Partnership for Energy Affordability in Multi-Family Housing. She conducted participant surveys, analyzed and reported quantitative and qualitative results. In 2005 and 2006, she managed the impact evaluation. She oversaw and managed auditors who completed 35 onsite audits and used audit results to calculate verified energy savings.

DNV GL, City Public Service, San Antonio

Apr 2004 - Sep 2008

Position: Team Member

Description: Ms. Kuiken was the task manager for DNV GL's 2006 through 2008 impact evaluations of the prescriptive and custom commercial and industrial energy efficiency programs in Texas. She also evaluated the residential and commercial prescriptive cooling program. She determined data collection details, wrote surveys for participants, managed completion of surveys, and calculated verified gross energy savings. Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in San Antonio, Texas. She reviewed existing database structure for design and content, analyzed client billing data, used information from RECS, CBECS, and a recent residential appliance saturation study to estimate energy end use, researched energy efficiency measures for incremental cost, savings, and saturation, and reviewed existing tracking (database) information to verify efficient design and data integrity.

DNV GL, Hydro Quebec

Apr 2007 - Sep 2008

Position: Team Member

Description: Ms. Kuiken managed DNV GL's 2007/2008 impact evaluation of the Novoclimat Program, a multifamily new construction program in Quebec. She managed the completion of 20 site visits, reviewed existing paperwork, and performed detailed simulations of 15 participant sites in eQuest to verify energy savings.

DNV GL, Xcel Energy Services

Jul 2005 - Dec 2006

Position: Team Member

Description: Ms. Kuiken participated in DNV GL's 2005 demand-side management market potential study in Denver, Colorado and surrounding areas. She conducted site visits of medium-sized commercial end-users to determine the saturation of specific technologies and the potential for increasing that saturation. She used face-to-face interviews and facility tours to evaluate energy-using equipment and their control strategies.

DNV GL, California Public Utilities Commission

Apr 2004 - Nov 2006

Position: Team Member

Description: Ms. Kuiken assisted with DNV GL's 2006 evaluation of the California Statewide Multifamily Program. She assisted with the sample design for 120 site visits across the state of California, created survey forms and audit protocols, managed a team of 5 surveyors to complete field data collection, and analyzed survey data and applied results to program tracking data. Ms. Kuiken managed DNV GL's 2006 impact evaluation of the Design for Comfort Program, a whole-building custom program targeted to low-income multifamily properties in Southern California. She developed data collection requirements for each site, managed and performed site audits at ~15 sites, used collected data to verify energy efficiency simulations provided by the program, and determined program verified gross energy savings. Ms. Kuiken assisted with the 2004 evaluation of the Demand Control Ventilation Pilot Program in Southern California. She conducted participant surveys with contractors and distributors and analyzed and reported results.

DNV GL, New Hampshire Electric Utilities

Sep 2005 - Jun 2006

Position: Team Member

Projects

Description:	Ms. Kuiken was the task manager for DNV GL's 2005/2006 impact evaluation of the New Hampshire Large Commercial and Industrial Retrofit Program. She identified, scheduled, and managed onsite visits with participants in the program, developed an onsite plan that included estimation, direct measurement, and data logging, and managed onsite personnel. She also conducted phone interviews and analyzed onsite data and developed estimates of energy savings for a wide variety of projects, including variable speed air compressors, lighting, EMS systems, high efficiency HVAC, custom process measures, and more.
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DNV GL, U.S. Environmental Protection Agency

Aug 2004 - Aug 2005

Position:	Team Member
Description:	Ms. Kuiken aided in designing a survey sample for the 5th and 6th national household survey of customer awareness of ENERGY STAR in 2004 and 2005. She analyzed results from a nationwide Internet survey and compared data across survey years.

DNV GL, NSTAR

Aug 2004 - Dec 2004

Position:	Team Member
Description:	Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in Massachusetts. She used information from RECS and a recent residential appliance saturation study to estimate energy end use for residential customers, researched energy efficiency measures for incremental cost, savings, and applicability, and simulated data and analyzed and reported results.

Training

Year	Description
Apr 2019	Webinar: Introduction to Microsoft Teams
Oct 2017	Data Protection
Sep 2017	Information Security Training – Part 1
Feb 2017	Harassment Awareness for Managers
Feb 2016	Introduction to the KAM/KCM role in DNV GL, web
Dec 2015	ISO14001/OHSAS18001 and DNV GL HSE Mgt. System
Oct 2015	Compliance Module 1: DNV GL Code of Conduct – An introduction to expected conduct and behavior in daily business
Oct 2015	Compliance Module 2: 2010w DNV GL's approach to Anti-Corruption and Anti-Trust – An Introduction
Oct 2015	Violence in the Workplace
Sep 2015	Oracle Finance for Line Managers (web)
Sep 2015	Introduction to Oracle Finance (web)
Sep 2015	Oracle Finance for Project Managers
Jun 2015	Basic Health, Safety and Environment, web

Papers and publications

- Tamara Kuiken, Energy Efficiency Television Programming, American Council for an Energy-Efficient Economy, Aug 2014
- Tamara Kuiken, Evaluation Broad and Deep: Getting the Most Out of Nonresidential Portfolio Evaluations, American Council for an Energy-Efficient Economy, Aug 2012
- Tamara Kuiken, Energy Savings in a Commercial Building with Daylighting Controls: Empirical Study and DOE-2 Validation, Iowa State University, Aug 2002

Other Information

State of Wisconsin Licensed Professional Engineer

Member, Association of Energy Services Professionals (AESP)



BY E-MAIL AND WEB POSTING

December 6, 2021

**To: All Parties to EB-2020-0091 (Enbridge Gas Inc. Integrated Resource Planning Proceeding)
All Nominees to the Integrated Resource Planning Technical Working Group**

**Re: Integrated Resource Planning Technical Working Group (EB-2021-0246) -
Membership Selection**

This letter confirms the initial membership of the Integrated Resource Planning Technical Working Group (Working Group).

Background:

The OEB's July 22, 2021 [Decision and Order](#) established an Integrated Resource Planning (IRP) Framework for Enbridge Gas Inc. (Enbridge). Integrated resource planning involves consideration of both traditional facility solutions and alternative supply- or demand-side solutions to meet Enbridge's identified natural gas system needs. The IRP Framework provides direction on the OEB's requirements for IRP for Enbridge.

The Decision and Order (Chapter 10) required the OEB to establish a Technical Working Group led by OEB staff, to provide input on IRP issues that will be of value to both Enbridge for implementation and to the OEB in its oversight of the IRP Framework. The Working Group is expected to support an efficient and transparent implementation of this initial phase of the IRP Framework, facilitating future innovation in the energy sector regarding appropriate responses to emerging system needs.

Membership Selection:

On October 19, 2021, the OEB issued a [call for nominations](#) for non-utility members for the Working Group. The OEB indicated that the Working Group would also include representation from OEB staff and Enbridge, and could include EPCOR Natural Gas Limited Partnership and the Independent Electricity System Operator (IESO). The OEB indicated that, as per the IRP Decision and Order, the Working Group would be kept to a manageable size to ensure timely and effective consultation, and is expected to have approximately 10 members.

The OEB has selected seven non-utility members from 20 nominations received, and has also confirmed the representatives from OEB staff and Enbridge, and observers representing

EPCOR and the IESO. In making its selections for non-utility members, the OEB selected a group of members with a variety of relevant experience and expertise, and with limited duplication or omission of key skills. As per the Decision and Order, all members have relevant demonstrable technical expertise that relates to and informs the activities to be addressed by the Working Group.

Non-utility members will participate on the Working Group as individuals, not as representatives of an organization. Given the size of the Working Group, representation of all constituencies or interests potentially impacted by Enbridge's IRP activities is not possible. The Working Group may seek to make use of the expertise or input from other parties as appropriate in its work. It is also expected that there will be additional opportunities to contribute to the implementation of the IRP Framework, including participating in Enbridge's IRP stakeholder engagement process or in IRP-related regulatory proceedings before the OEB.

The initial membership of the Working Group is set out in Appendix A. The term of the Working Group is estimated to be for an initial period of two years.

The OEB thanks all nominees for their interest in participating on the Working Group.

Next Steps

It is anticipated that the Working Group will generally meet on a monthly basis. The OEB intends to hold the first IRP Working Group meeting in January 2022. Initial agenda items will include approving a terms of reference and developing a workplan based on the near-term priorities for the Working Group. Following Working Group meetings, the OEB will post the key outcomes and related meeting materials on its [website](#) unless materials are determined to be confidential, to allow stakeholders to follow the Working Group's progress.

Any questions related to the IRP Technical Working Group should be directed to Michael Parkes at Michael.Parkes@oeb.ca.

DATED at Toronto, December 6, 2021

ONTARIO ENERGY BOARD

Original signed by

Christine E. Long
Registrar

Appendix A: IRP Technical Working Group Members

Name	Role
Michael Parkes	OEB staff representative (Working Group chair)
Stephanie Cheng	OEB staff representative
Chris Ripley	Enbridge Gas representative
Jeff Mazzei	Enbridge Gas representative
Amber Crawford, Association of Municipalities of Ontario	Non-utility member
John Dikeos, ICF Consulting Canada Inc.	Non-utility member
Tammy Kuiken, DNV	Non-utility member
Cameron Leitch, EnWave Energy Corporation	Non-utility member
Chris Neme, Energy Futures Group	Non-utility member
Dwayne Quinn, DR Quinn & Associates Ltd.	Non-utility member
Jay Shepherd, Shepherd Energy Rubenstein Professional Corporation	Non-utility member
Kenneth Poon, EPCOR Natural Gas LP	Observer
Steven Norrie, Independent Electricity System Operator	Observer

January 18, 2022	0.5 hours	Meeting #1	Review meeting materials
January 18, 2022	2 hours	Meeting #1	Attend meeting
February 14, 2022	3 hours	N/A – general background research	Read D&O and Framework; notes
February 15, 2022	0.5 hours	Meeting #2	Review meeting materials
February 15, 2022	2 hours	Meeting #2	Attend meeting
February 21, 2022	7 hours	N/A – general background research	Read D&O and Framework; notes
March 22, 2022	2 hours	Meeting #3	Attend meeting and review materials
April 11, 2022	1.5 hours	N/A – IRP report	Review and comment on draft report
April 26, 2022	2 hours	Meeting #4	Attend meeting
May 30, 2022	1 hour	N/A – IRP report	Review and comment on draft report
June 21, 2022	2 hours	Meeting #6	Attend meeting



CURRICULUM VITAE

Tamara Kuiken

Head of Department, Engineering and Technology

Current position

Tamara Kuiken, P.E., is Vice President of DNV GL Energy Insights, overseeing nearly 40 engineers, data scientists, and market research professionals. Ms. Kuiken has 20 years of experience in energy estimation, energy efficiency program evaluation, cost effectiveness analysis, and end-use load monitoring in support of regulatory activities, resource planning, energy efficiency evaluation, and demand-side management initiatives. She has contributed to and directed studies in all sectors, including the governmental, commercial/industrial, residential, low income, agriculture, and institutional sectors. Ms. Kuiken works as a subject matter expert and manager or sponsor on projects. She is responsible for developing work plans; overseeing data management, sample design, data collection, engineering analysis, and statistical expansion; writing reports; and stakeholder communication. Her engineering background provides a strong foundation for the evaluation of large commercial and industrial projects with complex custom installations. She has extensive net-to-gross experience gained across a wide variety of jurisdictions and program types. Much of Ms. Kuiken's work has focused on collaboration and effective communication. Energy efficiency rightfully attracts attention from many sectors and stakeholder groups because it is often a component of public policy funded through municipalities or regulation. Ms. Kuiken is adept at understanding different industry perspectives and providing the context around issues, allowing all sides to make informed decisions. Ms. Kuiken specializes in explaining complex industry issues and their impacts on policy and energy efficiency implementation. She also has extensive experience in working across industry groups, collaborating and engaging with stakeholders in multiple markets and jurisdictions.

Languages

Language	Native	Speaking	Reading	Writing
English	✓	High	High	High

Education

Field of expertise	University/School	Year
Master of Science, Mechanical Engineering	Iowa State University	May 2002
Bachelor of Science, Mechanical Engineering	Iowa State University	May 1999

Summary of professional experience

Tamara Kuiken, P.E., is Vice President of DNV GL Energy Insights, overseeing nearly 40 engineers, data scientists, and market research professionals. She has 20 years of experience in energy estimation, energy efficiency program evaluation, cost effectiveness analysis, and end-use load monitoring in support of regulatory activities, resource planning, energy efficiency evaluation, and demand-side management initiatives. Ms. Kuiken has contributed to and directed studies in all sectors, including the governmental, commercial/industrial, residential, low income, agriculture, and institutional sectors.

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Summary of professional experience

and program types.

Much of her work has focused on collaboration and effective communication. Ms. Kuiken is adept at understanding different industry perspectives and providing the context around issues, allowing all sides to make informed decisions. She has extensive experience in working across industry groups, collaborating with and engaging stakeholders in multiple markets. She also specializes in explaining complex industry issues and their impacts on policy and energy efficiency implementation.

Employment

DNV GL		Jul 2003 - Present
Position:	Vice President	
Description:		
Nexant, Inc.		May 2002 - Jul 2003
Industrial Assessment Center		May 1999 - May 2003
Description:	Iowa State University	

Projects

Dominion Energy, Dominion Virginia Power		May 2015 - Mar 2024
Position:	Project Sponsor	
Description:	DNV delivers comprehensive, multi-year evaluation, measurement, and verification (EM&V) services to Dominion Energy for its DSM program portfolios in Virginia and North Carolina. We currently evaluate 27 different programs.	

DNV works collaboratively with Dominion Energy's program designers, multiple implementers, integrated resource planners (IRP), and energy supply team to integrate EM&V needs and results into all DSM program cycle stages. We estimate energy and demand savings (using tracking data), define data requirements, identify key data gaps, and develop EM&V plans. DNV develops detailed saving calculations algorithms for measures documented in the technical reference manual that we maintain and update annually for Dominion Energy. We then work closely with Dominion Energy's program staff to define the required and optional data fields and to balance practical implementer data collection considerations with improved calculation rigor. At the program cycle's back end, we use study results to improve program implementation, improve IRPs (with program load shapes developed using measured and verified data), support energy efficiency and demand reduction program bids into PJM, and calculate savings to recover lost revenue and set base rates in North Carolina and Virginia (where we help set base rates only).

DNV's support includes developing engineering protocols, managing data quality standards, tracking program savings, collecting field and survey data, providing annual EM&V reporting, supporting the stakeholder process, estimating lost revenue, and supplying expert testimony. Early in the process, we worked with program managers to develop Standard Engineering and Tracking Protocols (STEPs) to estimate energy and demand savings using program and participant tracking data, to define data tracking requirements for EM&V processes, to key identify data gaps, and to develop EM&V plans.

Ms. Kuiken is the project sponsor for this portfolio.

Projects

DNV GL, Ontario Energy Board		Mar 2016 - Dec 2022
Position:	Project Manager/Sponsor	
Description:	<p>□ Ms. Kuiken is managing DNV GL's engagement as the Ontario Energy Board's (OEB) Evaluation Contractor. DNV GL directs evaluation planning, policy, and execution for the Natural Gas Demand-Side Management programs on behalf of the OEB. We oversee evaluation studies implemented by other contractors, directing them on methodology, execution, and reporting. We conduct primary evaluation on the portfolio of programs by reviewing documentation, verifying energy savings estimates, and applying the results of previously conducted studies. We provide opinions on the shareholder incentive and lost revenue amounts due to the implementing utilities and calculate program-level and portfolio-level cost effectiveness. DNV GL also solicits input from the Evaluation Advisory Committee (made up of representatives from provincial government, ratepayer advocacy groups, the utilities, and the OEB) on the evaluation industry best practices and gathers input to inform evaluation policy and implementation. Ms. Kuiken's primary role is to facilitate communication between the evaluation teams and EAC and oversee reporting and evaluation activities. Ms. Kuiken is the project sponsor of DNV GL's implementation of the OEB's custom project savings verification, spillover, and free ridership studies. For these projects, DNV GL studies a sample of commercial and industrial custom projects implemented by the two natural gas utilities in Ontario. For a sample of projects, DNV GL collects data on project operation, equipment efficiency, project influence, and additional energy savings measures implemented and expands the results to the population to estimate a gross realization rate, free ridership rate, and spillover rate resulting from custom projects. Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the EAC.</p>	
New Hampshire Program Administrators, New Hampshire Non-energy Impacts		Oct 2020
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's non-energy impact analysis for the New Hampshire utilities' prescriptive energy efficiency programs. DNV GL conducted a review of literature to identify and quantify the non-energy impacts associated with the measures. We also developed a database of each measure, the type of impact, and our relative confidence in the quantified result. Ms. Kuiken conducted quality control for the project deliverables and contributed to communication between the project manager and the client.</p>	
Massachusetts Cross-Cutting NEI Study		Aug 2019
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's studies on commercial and industrial (C&I) non-energy impacts (NEI) for the Massachusetts Program Administrators (PAs). DNV GL conducts secondary source research, interviews program and utility staff, and develops work plans for studying C&I NEIs with input from the Massachusetts PAs and other stakeholders. In coming years, DNV GL will conduct market research with participants and vendors and collect data to determine estimates of NEIs for program measures. Ms. Kuiken conducts quality control on the project deliverables and contributes subject matter expertise to the scoping and strategy discussions.</p>	
AEP Ohio		Nov 2017 - Oct 2018
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for AEP Ohio's commercial and industrial energy efficiency program. DNV GL estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 200 measures offered by the AEP Ohio program. We also collected data from industrial clients to analyze the non-energy impacts associated with production or revenue changes associated with different energy efficiency measures. Finally, we conducted a review of the non-energy impact literature to identify less tangible non-energy impacts. Ms. Kuiken conducted quality control on the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>	
Independent Electric System Operator, Independent Electric System Operator of Ontario		Jul 2019 - Jul 2018
Position:	Project Manager	

Projects

Description:	Ms. Kuiken was the project manager for DNV GL's engagement with the Independent Electric System Operator (IESO) in Ontario to develop an innovation roadmap. DNV GL participated in IESO strategy meetings, facilitating group discussions and assembling input into a draft roadmap for public engagement. We also conducted a jurisdictional scan of innovation in multiple jurisdictions globally, and facilitated focus groups with academic, industry, and customer representatives to gather feedback on the draft roadmap. Ms. Kuiken was the primary contact between the IESO and project team, led the focus groups, and assembled the focus group results into a feedback memo.
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Consumers Energy

Jul 2017 - Mar 2018

Position:	Project Sponsor
Description:	<p>□ Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for Consumers Energy commercial and industrial energy efficiency program. DNV GL conducted a review of non-energy impact literature, produced 10 non-energy impact case studies, and estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 70 measures offered by the Consumers program. The work was assembled into program marketing materials to help customers understand the full benefit associated with energy efficiency measures. Ms. Kuiken conducted quality control of the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>

DNV GL, National Grid and Con Edison

Mar 2015 - Feb 2018

Position:	Project Manager
Description:	<p>□ Ms. Kuiken managed the New York Residential Appliance Metering study contracted through National Grid and Con Edison in New York. The project studied non-intrusive load monitoring (NILM) equipment and its ability to gather data and disaggregate it into individual residential end-use load shapes. In addition to directing procurement, installation, data collection, and analysis, Ms. Kuiken facilitated communication across the NY IOUs, NY ISO, NYSEDA, and the NY Department of Public Service.</p>

DNV GL, California Public Utility Commission HVAC Testing

Feb 2015 - Oct 2017

Position:	Project Manager
Description:	<p>Ms. Kuiken managed a laboratory project that tested residential and commercial packaged HVAC systems under a variety of maintenance faults to determine their impact on unit capacity and efficiency. The study reviewed typical maintenance faults such as condenser and evaporator coil blockages, refrigerant under-and over-charge, changes in airflow, and fixed economizer positioning under a number of simulated outdoor conditions. In her role as manager, Ms. Kuiken was responsible for coordinating with a number of stakeholder groups to determine the laboratory test plan. She then implemented the test using a third party provider, assist with interpreting the results, and wrote a report of the findings.</p>

Ontario Energy Board, Ontario Energy Board

Mar 2014 - Jan 2017

Position:	Project Sponsor
Description:	<p>Ontario Energy Board (OEB) Gas Program Evaluation, 2014-present. DNV GL is evaluating Union and Enbridge Gas's commercial and industrial custom programs on behalf of the Ontario Energy Board. The commercial and industrial (C&I) and multi-family custom programs include a full range of custom gas measures, including equipment replacement, retro-commissioning, repair, operations and maintenance (O&M), and a large customer self-direct program. The evaluation has collected data from four years of program participants, produced verification and free-ridership and spillover ratios applicable to the utilities programs.</p>
Activities performed:	<p>Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the Evaluation Advisory Committee.</p>

We Energies

Sep 2013 - Mar 2015

Position:	Project Manager
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Projects

Description: □ Ms. Kuiken managed the DNV GL evaluation of the We Energies' Residential Assistance Program. Ms. Kuiken developed the evaluation work plan, facilitating input from We Energies, participating trade allies, and the Public Service Commission of Wisconsin. Ms. Kuiken also managed the data collection, documentation review, analysis, and reporting.

DNV GL, Oak Ridge National Laboratory

Jan 2012 - Jan 2015

Position: Team Member

Description: Energy Efficiency Community Block Grant: Ms. Kuiken managed the impact evaluation of the Energy Efficiency Community Block Grant for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken managed the verified savings calculations of 260 grants offered across the country and contributed to the attribution analysis methodology. State Energy Program: Ms. Kuiken managed the DNV GL portion of the Nonresidential Retrofit State Energy Program evaluation for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken directed the documentation requests, telephone and on-site data collection, analysis, and reporting for 13 programs offered in states across the country and contributed to the attribution analysis methodology.

DNV GL, Con Edison

Jan 2012 - May 2014

Position: Project Manager

Description: Ms. Kuiken managed the impact evaluation of the Small Business Direct Install program for Con Edison and Orange and Rockland utilities in New York. The study called for a billing analysis of participating businesses and more than 250 site visits to verify installation and meter operating hours. Ms. Kuiken also oversaw the development of attribution adjustment factors and net savings estimates for the program.

DNV GL, Michigan Electric Cooperative Association

Mar 2010 - Apr 2014

Position: Project Manager

Description: Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed four rounds of impact evaluation of the Energy Optimization Programs for a consortium of utilities in Michigan. Programs included residential new construction, ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. In the first three rounds, Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings. In the final year, Ms. Kuiken directed the audit and certification of the program tracking database and savings reports.

DNV GL, Alliant Energy - IPL

May 2005 - Oct 2013

Position: Project Manager

Description: Ms. Kuiken managed the process and impact evaluations of the 2009 – 2013 Energy Efficiency Plan and directed the evaluation of the PowerHouse television program for Alliant Energy in Iowa. The Energy Efficiency Plan programs included residential, nonresidential, and agriculture prescriptive; appliance recycling; direct load control; nonresidential custom; low income; home energy audits; renewable; and various educational and other programs. Ms. Kuiken managed study design, oversaw sample design and data collection, coordinated impact analyses, and incorporated process and impact evaluation results into a program-level report. She organized and managed the simultaneous evaluation of 20 distinct programs and oversaw client presentations, final report production, and additional scope and study requests. For the PowerHouse evaluation, Ms. Kuiken directed study design, oversaw sample design and data collection, and directed and reviewed the modeling results. Ms. Kuiken also participated in the 2005-2006 evaluation of the Alliant Energy efficiency and direct load control programs in Iowa and evaluated the energy savings estimates and algorithms used for the Agricultural Prescriptive Program in 2007.

DNV GL, Michigan Community Action Agency Association

Mar 2010 - Apr 2013

Position: Project Manager

Projects

Description:	Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed the evaluation of the Efficiency United statewide energy efficiency program in Michigan for 3 years. Programs included ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings.
DNV GL, Alliant Energy - WPL	
Oct 2009 - Aug 2011	
Position:	Project Manager
Description:	Ms. Kuiken managed the impact evaluation of the Alliant Energy Shared Savings Program in Wisconsin in 2009 and 2010. She oversaw telephone and on-site data collection for energy efficiency measures installed in the commercial and industrial sectors and monitored data analysis to determine net program savings. She also coordinated study efforts with the evaluation of the Focus on Energy Program.
DNV GL, Public Service Commission of Wisconsin	
Jul 2003 - Jun 2011	
Position:	Project Manager
Description:	Ms. Kuiken managed the evaluation of the Focus on Energy Business Programs statewide public benefits program in Wisconsin in 2010. The evaluation included an impact evaluation and a study of the savings resulting from the Education and Training program. She also participated in past evaluations of this program (since 2003), which included deemed savings review, a lighting supply-side study, a measure life study, an incremental cost study, and research into net-to-gross approaches and analysis methods. Ms. Kuiken managed the impact evaluation of the Focus on Energy Renewables Program statewide public benefits program from 2003-2008. She oversaw sample design, collected data from program participants, estimated gross energy savings resulting from implemented projects, and analyzed survey data to determine net savings.
DNV GL, Vectren Natural Gas, Indiana	
Jan 2009 - Nov 2009	
Position:	Project Manager
Description:	Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of the Indiana prescriptive and custom natural gas programs in the Vectren service territory. She oversaw data acquisition and sample design, developed survey instruments, and managed data collection and survey delivery. She also directed data analysis and the development of adjustment factors to determine net program savings.
DNV GL, San Diego Gas and Electric	
Mar 2009 - Oct 2009	
Position:	Project Manager
Description:	Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of a commercial load control program in Southern California. She developed a system to recruit 400 participants for evaluation, developed onsite protocols, specified measurement equipment, trained field staff, and implemented quality control. She oversaw the installation and removal of meters on commercial air conditioning equipment.
DNV GL, New Jersey Board of Public Utilities	
May 2007 - Oct 2009	
Position:	Team Member
Description:	Ms. Kuiken was a task manager for DNV GL's 2007 to 2009 evaluation of the Smart Start commercial and industrial energy efficiency program in New Jersey. She oversaw assembly of data from 7 different utilities, assisted with sample design, oversaw verification of energy savings, and managed the review and update of statewide deemed savings protocols.
DNV GL, Pacific Gas and Electric	
Apr 2004 - Apr 2009	
Position:	Team Member

Projects

Description: Ms. Kuiken was the task manager for DNV GL's 2007/2008 evaluation of a pilot load control program in Northern California. She developed a system to recruit 550 participants for evaluation, produced onsite protocols, hired temporary employees, trained field staff, and implemented quality control. She oversaw the installation of nearly 670 meters on residential air conditioners within a 6 week period and monitored the removal of all meters in a 2 week period. Ms. Kuiken participated in DNV GL's 2004 evaluation of the Partnership for Energy Affordability in Multi-Family Housing. She conducted participant surveys, analyzed and reported quantitative and qualitative results. In 2005 and 2006, she managed the impact evaluation. She oversaw and managed auditors who completed 35 onsite audits and used audit results to calculate verified energy savings.

DNV GL, City Public Service, San Antonio

Apr 2004 - Sep 2008

Position: Team Member

Description: Ms. Kuiken was the task manager for DNV GL's 2006 through 2008 impact evaluations of the prescriptive and custom commercial and industrial energy efficiency programs in Texas. She also evaluated the residential and commercial prescriptive cooling program. She determined data collection details, wrote surveys for participants, managed completion of surveys, and calculated verified gross energy savings. Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in San Antonio, Texas. She reviewed existing database structure for design and content, analyzed client billing data, used information from RECS, CBECS, and a recent residential appliance saturation study to estimate energy end use, researched energy efficiency measures for incremental cost, savings, and saturation, and reviewed existing tracking (database) information to verify efficient design and data integrity.

DNV GL, Hydro Quebec

Apr 2007 - Sep 2008

Position: Team Member

Description: Ms. Kuiken managed DNV GL's 2007/2008 impact evaluation of the Novoclimat Program, a multifamily new construction program in Quebec. She managed the completion of 20 site visits, reviewed existing paperwork, and performed detailed simulations of 15 participant sites in eQuest to verify energy savings.

DNV GL, Xcel Energy Services

Jul 2005 - Dec 2006

Position: Team Member

Description: Ms. Kuiken participated in DNV GL's 2005 demand-side management market potential study in Denver, Colorado and surrounding areas. She conducted site visits of medium-sized commercial end-users to determine the saturation of specific technologies and the potential for increasing that saturation. She used face-to-face interviews and facility tours to evaluate energy-using equipment and their control strategies.

DNV GL, California Public Utilities Commission

Apr 2004 - Nov 2006

Position: Team Member

Description: Ms. Kuiken assisted with DNV GL's 2006 evaluation of the California Statewide Multifamily Program. She assisted with the sample design for 120 site visits across the state of California, created survey forms and audit protocols, managed a team of 5 surveyors to complete field data collection, and analyzed survey data and applied results to program tracking data. Ms. Kuiken managed DNV GL's 2006 impact evaluation of the Design for Comfort Program, a whole-building custom program targeted to low-income multifamily properties in Southern California. She developed data collection requirements for each site, managed and performed site audits at ~15 sites, used collected data to verify energy efficiency simulations provided by the program, and determined program verified gross energy savings. Ms. Kuiken assisted with the 2004 evaluation of the Demand Control Ventilation Pilot Program in Southern California. She conducted participant surveys with contractors and distributors and analyzed and reported results.

DNV GL, New Hampshire Electric Utilities

Sep 2005 - Jun 2006

Position: Team Member

Projects

Description:	Ms. Kuiken was the task manager for DNV GL's 2005/2006 impact evaluation of the New Hampshire Large Commercial and Industrial Retrofit Program. She identified, scheduled, and managed onsite visits with participants in the program, developed an onsite plan that included estimation, direct measurement, and data logging, and managed onsite personnel. She also conducted phone interviews and analyzed onsite data and developed estimates of energy savings for a wide variety of projects, including variable speed air compressors, lighting, EMS systems, high efficiency HVAC, custom process measures, and more.
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DNV GL, U.S. Environmental Protection Agency

Aug 2004 - Aug 2005

Position:	Team Member
Description:	Ms. Kuiken aided in designing a survey sample for the 5th and 6th national household survey of customer awareness of ENERGY STAR in 2004 and 2005. She analyzed results from a nationwide Internet survey and compared data across survey years.

DNV GL, NSTAR

Aug 2004 - Dec 2004

Position:	Team Member
Description:	Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in Massachusetts. She used information from RECS and a recent residential appliance saturation study to estimate energy end use for residential customers, researched energy efficiency measures for incremental cost, savings, and applicability, and simulated data and analyzed and reported results.

Training

Year	Description
Apr 2019	Webinar: Introduction to Microsoft Teams
Oct 2017	Data Protection
Sep 2017	Information Security Training – Part 1
Feb 2017	Harassment Awareness for Managers
Feb 2016	Introduction to the KAM/KCM role in DNV GL, web
Dec 2015	ISO14001/OHSAS18001 and DNV GL HSE Mgt. System
Oct 2015	Compliance Module 1: DNV GL Code of Conduct – An introduction to expected conduct and behavior in daily business
Oct 2015	Compliance Module 2: 2010w DNV GL's approach to Anti-Corruption and Anti-Trust – An Introduction
Oct 2015	Violence in the Workplace
Sep 2015	Oracle Finance for Line Managers (web)
Sep 2015	Introduction to Oracle Finance (web)
Sep 2015	Oracle Finance for Project Managers
Jun 2015	Basic Health, Safety and Environment, web

Papers and publications

- Tamara Kuiken, Energy Efficiency Television Programming, American Council for an Energy-Efficient Economy, Aug 2014
- Tamara Kuiken, Evaluation Broad and Deep: Getting the Most Out of Nonresidential Portfolio Evaluations, American Council for an Energy-Efficient Economy, Aug 2012
- Tamara Kuiken, Energy Savings in a Commercial Building with Daylighting Controls: Empirical Study and DOE-2 Validation, Iowa State University, Aug 2002

Other Information

State of Wisconsin Licensed Professional Engineer

Member, Association of Energy Services Professionals (AESP)



CURRICULUM VITAE

Tamara Kuiken

Head of Department, Engineering and Technology

Current position

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Language	Native	Speaking	Reading	Writing
English	✓	High	High	High

Education

Field of expertise	University/School	Year
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Bachelor of Science, Mechanical Engineering	Iowa State University	May 1999

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Position:	Project Sponsor	
Description:	DNV delivers comprehensive, multi-year evaluation, measurement, and verification (EM&V) services to Dominion Energy for its DSM program portfolios in Virginia and North Carolina. We currently evaluate 27 different programs.	

DNV works collaboratively with Dominion Energy's program designers, multiple implementers, integrated resource planners (IRP), and energy supply team to integrate EM&V needs and results into all DSM program cycle stages. We estimate energy and demand savings (using tracking data), define data requirements, identify key data gaps, and develop EM&V plans. DNV develops detailed saving calculations algorithms for measures documented in the technical reference manual that we maintain and update annually for Dominion Energy. We then work closely with Dominion Energy's program staff to define the required and optional data fields and to balance practical implementer data collection considerations with improved calculation rigor. At the program cycle's back end, we use study results to improve program implementation, improve IRPs (with program load shapes developed using measured and verified data), support energy efficiency and demand reduction program bids into PJM, and calculate savings to recover lost revenue and set base rates in North Carolina and Virginia (where we help set base rates only).

DNV's support includes developing engineering protocols, managing data quality standards, tracking program savings, collecting field and survey data, providing annual EM&V reporting, supporting the stakeholder process, estimating lost revenue, and supplying expert testimony. Early in the process, we worked with program managers to develop Standard Engineering and Tracking Protocols (STEPs) to estimate energy and demand savings using program and participant tracking data, to define data tracking requirements for EM&V processes, to key identify data gaps, and to develop EM&V plans.

Ms. Kuiken is the project sponsor for this portfolio.

Projects

DNV GL, Ontario Energy Board		Mar 2016 - Dec 2022
Position:	Project Manager/Sponsor	
Description:	<p>□ Ms. Kuiken is managing DNV GL's engagement as the Ontario Energy Board's (OEB) Evaluation Contractor. DNV GL directs evaluation planning, policy, and execution for the Natural Gas Demand-Side Management programs on behalf of the OEB. We oversee evaluation studies implemented by other contractors, directing them on methodology, execution, and reporting. We conduct primary evaluation on the portfolio of programs by reviewing documentation, verifying energy savings estimates, and applying the results of previously conducted studies. We provide opinions on the shareholder incentive and lost revenue amounts due to the implementing utilities and calculate program-level and portfolio-level cost effectiveness. DNV GL also solicits input from the Evaluation Advisory Committee (made up of representatives from provincial government, ratepayer advocacy groups, the utilities, and the OEB) on the evaluation industry best practices and gathers input to inform evaluation policy and implementation. Ms. Kuiken's primary role is to facilitate communication between the evaluation teams and EAC and oversee reporting and evaluation activities. Ms. Kuiken is the project sponsor of DNV GL's implementation of the OEB's custom project savings verification, spillover, and free ridership studies. For these projects, DNV GL studies a sample of commercial and industrial custom projects implemented by the two natural gas utilities in Ontario. For a sample of projects, DNV GL collects data on project operation, equipment efficiency, project influence, and additional energy savings measures implemented and expands the results to the population to estimate a gross realization rate, free ridership rate, and spillover rate resulting from custom projects. Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the EAC.</p>	
New Hampshire Program Administrators, New Hampshire Non-energy Impacts		Oct 2020
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's non-energy impact analysis for the New Hampshire utilities' prescriptive energy efficiency programs. DNV GL conducted a review of literature to identify and quantify the non-energy impacts associated with the measures. We also developed a database of each measure, the type of impact, and our relative confidence in the quantified result. Ms. Kuiken conducted quality control for the project deliverables and contributed to communication between the project manager and the client.</p>	
Massachusetts Cross-Cutting NEI Study		Aug 2019
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken is the project sponsor of DNV GL's studies on commercial and industrial (C&I) non-energy impacts (NEI) for the Massachusetts Program Administrators (PAs). DNV GL conducts secondary source research, interviews program and utility staff, and develops work plans for studying C&I NEIs with input from the Massachusetts PAs and other stakeholders. In coming years, DNV GL will conduct market research with participants and vendors and collect data to determine estimates of NEIs for program measures. Ms. Kuiken conducts quality control on the project deliverables and contributes subject matter expertise to the scoping and strategy discussions.</p>	
AEP Ohio		Nov 2017 - Oct 2018
Position:	Project Sponsor	
Description:	<p>Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for AEP Ohio's commercial and industrial energy efficiency program. DNV GL estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 200 measures offered by the AEP Ohio program. We also collected data from industrial clients to analyze the non-energy impacts associated with production or revenue changes associated with different energy efficiency measures. Finally, we conducted a review of the non-energy impact literature to identify less tangible non-energy impacts. Ms. Kuiken conducted quality control on the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>	
Independent Electric System Operator, Independent Electric System Operator of Ontario		Jul 2019 - Jul 2018
Position:	Project Manager	

Projects

Description:	Ms. Kuiken was the project manager for DNV GL's engagement with the Independent Electric System Operator (IESO) in Ontario to develop an innovation roadmap. DNV GL participated in IESO strategy meetings, facilitating group discussions and assembling input into a draft roadmap for public engagement. We also conducted a jurisdictional scan of innovation in multiple jurisdictions globally, and facilitated focus groups with academic, industry, and customer representatives to gather feedback on the draft roadmap. Ms. Kuiken was the primary contact between the IESO and project team, led the focus groups, and assembled the focus group results into a feedback memo.
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Consumers Energy

Jul 2017 - Mar 2018

Position:	Project Sponsor
Description:	<p>□ Ms. Kuiken was the project sponsor of DNV GL's non-energy impact analysis for Consumers Energy commercial and industrial energy efficiency program. DNV GL conducted a review of non-energy impact literature, produced 10 non-energy impact case studies, and estimated the life cycle cost savings associated with operational and maintenance non-energy impacts for more than 70 measures offered by the Consumers program. The work was assembled into program marketing materials to help customers understand the full benefit associated with energy efficiency measures. Ms. Kuiken conducted quality control of the project deliverables, provided subject matter expertise to the life cycle cost analysis, and contributed to communication between the project manager and the client.</p>

DNV GL, National Grid and Con Edison

Mar 2015 - Feb 2018

Position:	Project Manager
Description:	<p>□ Ms. Kuiken managed the New York Residential Appliance Metering study contracted through National Grid and Con Edison in New York. The project studied non-intrusive load monitoring (NILM) equipment and its ability to gather data and disaggregate it into individual residential end-use load shapes. In addition to directing procurement, installation, data collection, and analysis, Ms. Kuiken facilitated communication across the NY IOUs, NY ISO, NYSEDA, and the NY Department of Public Service.</p>

DNV GL, California Public Utility Commission HVAC Testing

Feb 2015 - Oct 2017

Position:	Project Manager
Description:	<p>Ms. Kuiken managed a laboratory project that tested residential and commercial packaged HVAC systems under a variety of maintenance faults to determine their impact on unit capacity and efficiency. The study reviewed typical maintenance faults such as condenser and evaporator coil blockages, refrigerant under-and over-charge, changes in airflow, and fixed economizer positioning under a number of simulated outdoor conditions. In her role as manager, Ms. Kuiken was responsible for coordinating with a number of stakeholder groups to determine the laboratory test plan. She then implemented the test using a third party provider, assist with interpreting the results, and wrote a report of the findings.</p>

Ontario Energy Board, Ontario Energy Board

Mar 2014 - Jan 2017

Position:	Project Sponsor
Description:	<p>Ontario Energy Board (OEB) Gas Program Evaluation, 2014-present. DNV GL is evaluating Union and Enbridge Gas's commercial and industrial custom programs on behalf of the Ontario Energy Board. The commercial and industrial (C&I) and multi-family custom programs include a full range of custom gas measures, including equipment replacement, retro-commissioning, repair, operations and maintenance (O&M), and a large customer self-direct program. The evaluation has collected data from four years of program participants, produced verification and free-ridership and spillover ratios applicable to the utilities programs.</p>
Activities performed:	<p>Ms. Kuiken conducts quality control of the project deliverables and facilitates communication between the project manager, the OEB, and the Evaluation Advisory Committee.</p>

We Energies

Sep 2013 - Mar 2015

Position:	Project Manager
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Projects

Description: □ Ms. Kuiken managed the DNV GL evaluation of the We Energies' Residential Assistance Program. Ms. Kuiken developed the evaluation work plan, facilitating input from We Energies, participating trade allies, and the Public Service Commission of Wisconsin. Ms. Kuiken also managed the data collection, documentation review, analysis, and reporting.

DNV GL, Oak Ridge National Laboratory

Jan 2012 - Jan 2015

Position: Team Member

Description: Energy Efficiency Community Block Grant: Ms. Kuiken managed the impact evaluation of the Energy Efficiency Community Block Grant for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken managed the verified savings calculations of 260 grants offered across the country and contributed to the attribution analysis methodology. State Energy Program: Ms. Kuiken managed the DNV GL portion of the Nonresidential Retrofit State Energy Program evaluation for the US Department of Energy, under contract to Oak Ridge National Laboratory. Ms. Kuiken directed the documentation requests, telephone and on-site data collection, analysis, and reporting for 13 programs offered in states across the country and contributed to the attribution analysis methodology.

DNV GL, Con Edison

Jan 2012 - May 2014

Position: Project Manager

Description: Ms. Kuiken managed the impact evaluation of the Small Business Direct Install program for Con Edison and Orange and Rockland utilities in New York. The study called for a billing analysis of participating businesses and more than 250 site visits to verify installation and meter operating hours. Ms. Kuiken also oversaw the development of attribution adjustment factors and net savings estimates for the program.

DNV GL, Michigan Electric Cooperative Association

Mar 2010 - Apr 2014

Position: Project Manager

Description: Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed four rounds of impact evaluation of the Energy Optimization Programs for a consortium of utilities in Michigan. Programs included residential new construction, ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. In the first three rounds, Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings. In the final year, Ms. Kuiken directed the audit and certification of the program tracking database and savings reports.

DNV GL, Alliant Energy - IPL

May 2005 - Oct 2013

Position: Project Manager

Description: Ms. Kuiken managed the process and impact evaluations of the 2009 – 2013 Energy Efficiency Plan and directed the evaluation of the PowerHouse television program for Alliant Energy in Iowa. The Energy Efficiency Plan programs included residential, nonresidential, and agriculture prescriptive; appliance recycling; direct load control; nonresidential custom; low income; home energy audits; renewable; and various educational and other programs. Ms. Kuiken managed study design, oversaw sample design and data collection, coordinated impact analyses, and incorporated process and impact evaluation results into a program-level report. She organized and managed the simultaneous evaluation of 20 distinct programs and oversaw client presentations, final report production, and additional scope and study requests. For the PowerHouse evaluation, Ms. Kuiken directed study design, oversaw sample design and data collection, and directed and reviewed the modeling results. Ms. Kuiken also participated in the 2005-2006 evaluation of the Alliant Energy efficiency and direct load control programs in Iowa and evaluated the energy savings estimates and algorithms used for the Agricultural Prescriptive Program in 2007.

DNV GL, Michigan Community Action Agency Association

Mar 2010 - Apr 2013

Position: Project Manager

Projects

Description: Michigan Multi-client (21 utilities): Ongoing multi-year impact and process evaluations of the Efficiency UNITED portfolio of residential and C&I programs. The evaluations produce verified savings, measure freeridership and provide actionable recommendations for improving the programs. Ms. Kuiken managed the evaluation of the Efficiency United statewide energy efficiency program in Michigan for 3 years. Programs included ENERGY STAR products, residential HVAC, appliance recycling, home energy audits, and commercial and industrial prescriptive and custom measures. Ms. Kuiken coordinated with the process evaluation of the same programs and monitored data collection, site visits, engineering reviews, and net-to-gross analyses to produce life cycle net savings.

DNV GL, Alliant Energy - WPL

Oct 2009 - Aug 2011

Position: Project Manager

Description: Ms. Kuiken managed the impact evaluation of the Alliant Energy Shared Savings Program in Wisconsin in 2009 and 2010. She oversaw telephone and on-site data collection for energy efficiency measures installed in the commercial and industrial sectors and monitored data analysis to determine net program savings. She also coordinated study efforts with the evaluation of the Focus on Energy Program.

DNV GL, Public Service Commission of Wisconsin

Jul 2003 - Jun 2011

Position: Project Manager

Description: Ms. Kuiken managed the evaluation of the Focus on Energy Business Programs statewide public benefits program in Wisconsin in 2010. The evaluation included an impact evaluation and a study of the savings resulting from the Education and Training program. She also participated in past evaluations of this program (since 2003), which included deemed savings review, a lighting supply-side study, a measure life study, an incremental cost study, and research into net-to-gross approaches and analysis methods. Ms. Kuiken managed the impact evaluation of the Focus on Energy Renewables Program statewide public benefits program from 2003-2008. She oversaw sample design, collected data from program participants, estimated gross energy savings resulting from implemented projects, and analyzed survey data to determine net savings.

DNV GL, Vectren Natural Gas, Indiana

Jan 2009 - Nov 2009

Position: Project Manager

Description: Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of the Indiana prescriptive and custom natural gas programs in the Vectren service territory. She oversaw data acquisition and sample design, developed survey instruments, and managed data collection and survey delivery. She also directed data analysis and the development of adjustment factors to determine net program savings.

DNV GL, San Diego Gas and Electric

Mar 2009 - Oct 2009

Position: Project Manager

Description: Ms. Kuiken was the project manager for DNV GL's 2009 evaluation of a commercial load control program in Southern California. She developed a system to recruit 400 participants for evaluation, developed onsite protocols, specified measurement equipment, trained field staff, and implemented quality control. She oversaw the installation and removal of meters on commercial air conditioning equipment.

DNV GL, New Jersey Board of Public Utilities

May 2007 - Oct 2009

Position: Team Member

Description: Ms. Kuiken was a task manager for DNV GL's 2007 to 2009 evaluation of the Smart Start commercial and industrial energy efficiency program in New Jersey. She oversaw assembly of data from 7 different utilities, assisted with sample design, oversaw verification of energy savings, and managed the review and update of statewide deemed savings protocols.

DNV GL, Pacific Gas and Electric

Apr 2004 - Apr 2009

Position: Team Member

Projects

Description: Ms. Kuiken was the task manager for DNV GL's 2007/2008 evaluation of a pilot load control program in Northern California. She developed a system to recruit 550 participants for evaluation, produced onsite protocols, hired temporary employees, trained field staff, and implemented quality control. She oversaw the installation of nearly 670 meters on residential air conditioners within a 6 week period and monitored the removal of all meters in a 2 week period. Ms. Kuiken participated in DNV GL's 2004 evaluation of the Partnership for Energy Affordability in Multi-Family Housing. She conducted participant surveys, analyzed and reported quantitative and qualitative results. In 2005 and 2006, she managed the impact evaluation. She oversaw and managed auditors who completed 35 onsite audits and used audit results to calculate verified energy savings.

DNV GL, City Public Service, San Antonio

Apr 2004 - Sep 2008

Position: Team Member

Description: Ms. Kuiken was the task manager for DNV GL's 2006 through 2008 impact evaluations of the prescriptive and custom commercial and industrial energy efficiency programs in Texas. She also evaluated the residential and commercial prescriptive cooling program. She determined data collection details, wrote surveys for participants, managed completion of surveys, and calculated verified gross energy savings. Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in San Antonio, Texas. She reviewed existing database structure for design and content, analyzed client billing data, used information from RECS, CBECS, and a recent residential appliance saturation study to estimate energy end use, researched energy efficiency measures for incremental cost, savings, and saturation, and reviewed existing tracking (database) information to verify efficient design and data integrity.

DNV GL, Hydro Quebec

Apr 2007 - Sep 2008

Position: Team Member

Description: Ms. Kuiken managed DNV GL's 2007/2008 impact evaluation of the Novoclimat Program, a multifamily new construction program in Quebec. She managed the completion of 20 site visits, reviewed existing paperwork, and performed detailed simulations of 15 participant sites in eQuest to verify energy savings.

DNV GL, Xcel Energy Services

Jul 2005 - Dec 2006

Position: Team Member

Description: Ms. Kuiken participated in DNV GL's 2005 demand-side management market potential study in Denver, Colorado and surrounding areas. She conducted site visits of medium-sized commercial end-users to determine the saturation of specific technologies and the potential for increasing that saturation. She used face-to-face interviews and facility tours to evaluate energy-using equipment and their control strategies.

DNV GL, California Public Utilities Commission

Apr 2004 - Nov 2006

Position: Team Member

Description: Ms. Kuiken assisted with DNV GL's 2006 evaluation of the California Statewide Multifamily Program. She assisted with the sample design for 120 site visits across the state of California, created survey forms and audit protocols, managed a team of 5 surveyors to complete field data collection, and analyzed survey data and applied results to program tracking data. Ms. Kuiken managed DNV GL's 2006 impact evaluation of the Design for Comfort Program, a whole-building custom program targeted to low-income multifamily properties in Southern California. She developed data collection requirements for each site, managed and performed site audits at ~15 sites, used collected data to verify energy efficiency simulations provided by the program, and determined program verified gross energy savings. Ms. Kuiken assisted with the 2004 evaluation of the Demand Control Ventilation Pilot Program in Southern California. She conducted participant surveys with contractors and distributors and analyzed and reported results.

DNV GL, New Hampshire Electric Utilities

Sep 2005 - Jun 2006

Position: Team Member

Projects

Description:	Ms. Kuiken was the task manager for DNV GL's 2005/2006 impact evaluation of the New Hampshire Large Commercial and Industrial Retrofit Program. She identified, scheduled, and managed onsite visits with participants in the program, developed an onsite plan that included estimation, direct measurement, and data logging, and managed onsite personnel. She also conducted phone interviews and analyzed onsite data and developed estimates of energy savings for a wide variety of projects, including variable speed air compressors, lighting, EMS systems, high efficiency HVAC, custom process measures, and more.
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DNV GL, U.S. Environmental Protection Agency

Aug 2004 - Aug 2005

Position:	Team Member
Description:	Ms. Kuiken aided in designing a survey sample for the 5th and 6th national household survey of customer awareness of ENERGY STAR in 2004 and 2005. She analyzed results from a nationwide Internet survey and compared data across survey years.

DNV GL, NSTAR

Aug 2004 - Dec 2004

Position:	Team Member
Description:	Ms. Kuiken participated in DNV GL's 2004 energy efficiency potential study in Massachusetts. She used information from RECS and a recent residential appliance saturation study to estimate energy end use for residential customers, researched energy efficiency measures for incremental cost, savings, and applicability, and simulated data and analyzed and reported results.

Training

Year	Description
Apr 2019	Webinar: Introduction to Microsoft Teams
Oct 2017	Data Protection
Sep 2017	Information Security Training – Part 1
Feb 2017	Harassment Awareness for Managers
Feb 2016	Introduction to the KAM/KCM role in DNV GL, web
Dec 2015	ISO14001/OHSAS18001 and DNV GL HSE Mgt. System
Oct 2015	Compliance Module 1: DNV GL Code of Conduct – An introduction to expected conduct and behavior in daily business
Oct 2015	Compliance Module 2: 2010w DNV GL's approach to Anti-Corruption and Anti-Trust – An Introduction
Oct 2015	Violence in the Workplace
Sep 2015	Oracle Finance for Line Managers (web)
Sep 2015	Introduction to Oracle Finance (web)
Sep 2015	Oracle Finance for Project Managers
Jun 2015	Basic Health, Safety and Environment, web

Papers and publications

- Tamara Kuiken, Energy Efficiency Television Programming, American Council for an Energy-Efficient Economy, Aug 2014
- Tamara Kuiken, Evaluation Broad and Deep: Getting the Most Out of Nonresidential Portfolio Evaluations, American Council for an Energy-Efficient Economy, Aug 2012
- Tamara Kuiken, Energy Savings in a Commercial Building with Daylighting Controls: Empirical Study and DOE-2 Validation, Iowa State University, Aug 2002

Other Information

State of Wisconsin Licensed Professional Engineer

Member, Association of Energy Services Professionals (AESP)