

# **COST ESTIMATING COMMUNITY OF PRACTICE (CECOP)**

## **THE FIRST ANNUAL SYMPOSIUM**

**March 21-22, 2017**

James V. Forrestal Building Auditorium  
Department of Energy, Washington, DC





## CECOP SYMPOSIUM WELCOME LETTER



On behalf of the Cost Estimating Analysis Group (CEAG) Council and Defense Programs, I would like to warmly welcome you to Washington, DC and the Department of Energy for the FIRST Cost Estimating Community of Practice (CECOP) Symposium.

CECOP was formed by the CEAG Council to exchange cost estimating best practices through collaborative relationships within government, industry, and the Nuclear Security Enterprise. The planning committee has brought together cost estimators from NNSA, DoE, NASA, GAO, DoD, and industry such that we can learn from each other. We all face unique cost estimating challenges and hope to leverage methodologies and lessons learned based upon each other's experience.

Since this is the FIRST CECOP Symposium, we need your help and active engagement in shaping our – that is, your – Community. The symposium is designed to get input and feedback, and we need YOU to assume a leadership role to ensure an effective SECOND Symposium. Without you, there is no Community!

I hope that you enjoy the Symposium and that the sessions will increase your understanding of cost estimating and your awareness of different cost estimating groups and processes. We look forward to learning from your experiences and receiving your feedback.

A handwritten signature in black ink, appearing to read 'Fana', with a stylized flourish at the end.

Fana Gebeyehu-Houston  
Chairwoman of CEAG  
Supervisory Program Analyst for the Office of Cost Policy and Analysis (NA-143)

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## COST ESTIMATING ANALYSIS GROUP



NNSA is responsible for ensuring the safety, security and reliability of the U.S. nuclear stockpile through its Defense Programs activities. The planning, programming, budgeting, and execution of these activities across the Nuclear Security Enterprise and NNSA involve complex, dynamic, and interdependent processes within and between the sites. This increases the challenge of estimating costs for these activities. In October 2013, Dr. Donald Cook, Former Deputy Administrator for Defense Programs, directed that a Cost Improvement Initiative be undertaken to identify key areas of improvement within the cost estimation process, while also establishing a series of standards and best practices to significantly improve cost estimating for both programs and projects in Defense Programs.

Multiple recommendations emerged from the initiative, one of which was the creation of a subgroup within the Integrated Planning Group for estimating life extension program costs for publication in the Stockpile Stewardship and Management Plan. Members of this subgroup recognized the need for developing a Cost Estimating Analysis

Group (CEAG) for Defense Programs that would lead continuous improvement of Defense Programs cost estimation practices and other related issues in the Enterprise.

The CEAG is composed of representatives from across the Enterprise, integrating the knowledge and expertise of professionals at the sites and NNSA headquarters. The CEAG has been chartered to lead independent cost estimate reviews and other cost analysis efforts as requested by Defense Programs leadership (NA-11, NA-12, NA-15, NA-18, NA-19) and approved by the CEAG Leadership Team. The CEAG is also responsible for leading the Cost Estimating Community of Practice (CECOP) and establishing cost estimating procedures, methodologies and best-practices specific to Defense Programs activities. This both informs higher-fidelity cost estimating efforts and also fosters more effective communication and collaboration.

The formalization of the CEAG was initiated to assure continuous improvement in support of the goals outlined in the Cost Improvement Initiative.

## COST ESTIMATING COMMUNITY OF PRACTICE



Similar to an academic consortium, the Cost Estimating Community of Practice (CECOP) is an informal gathering of cost estimating practitioners. The CECOP is focused on training, education and the exchange of cost estimating methodologies and best practices. Cost estimating professionals from the NNSA, Department of Energy, Department of Defense, contractors, and other experts in the field will have the opportunity to participate in the CECOP Symposium.

The development of the CECOP is one of the CEAG's highest priorities. The leadership team for the CECOP is composed of experienced cost estimators from the CEAG. In conjunction with the CEAG Chair and Council representatives,

the CECOP leadership team sets the priorities for the CECOP and develops and guides its values and guiding principles. In the initial stages of building and developing the CECOP, it is expected that most participants will be from the NNSA and NSE. As the community expands and the pool of participant expertise increases, the CECOP will be a group for the CEAG to pull from for specific expertise in a given field to support specific CEAG projects; however, the CECOP as a body will not be directly involved in DP projects. The CECOP is a standalone group focused on communication, community building and knowledge exchange in the form of quarterly conference calls and yearly conferences with cost-estimating focused tracks.



## CECOP SYMPOSIUM POLLING CAPABILITIES

We will be utilizing Poll Everywhere to engage with the audience real time. To respond to the questions, users will need to have SMS capability on their phone.  
To Register:

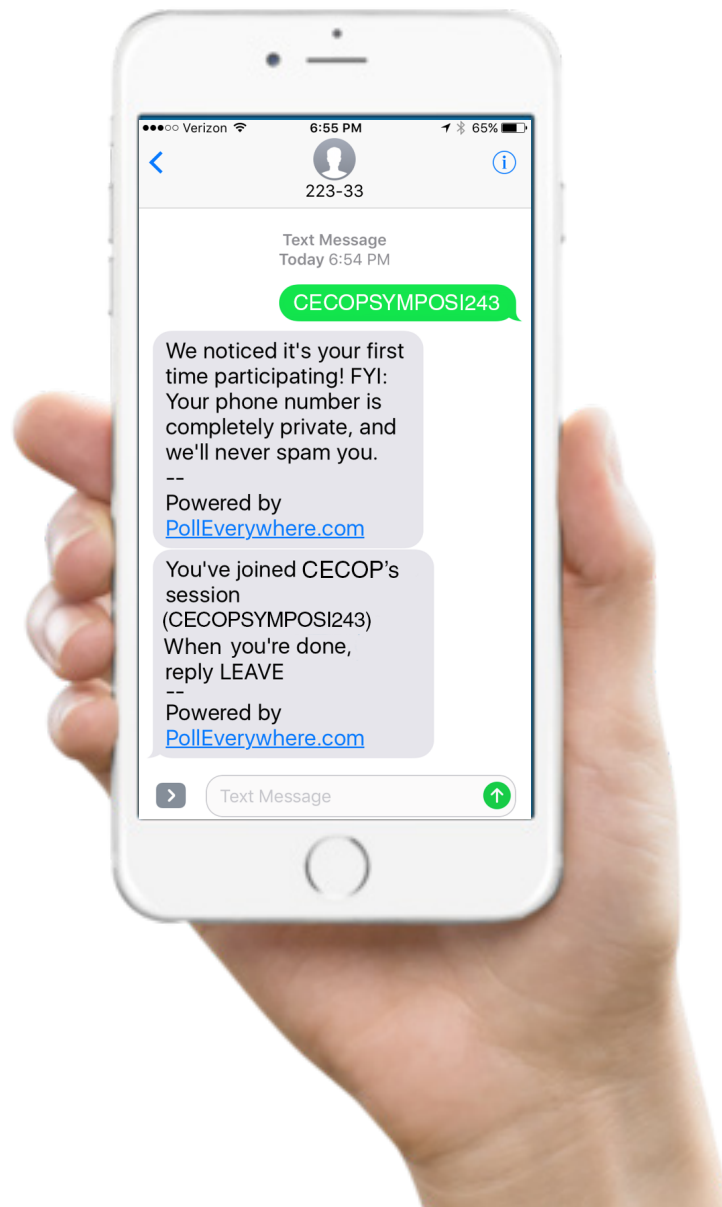
Text **CECOPSYMPOSI243** to 22333 to join the CECOP polling session. No additional software is required (only texting capability).

Then text A, B, C... to each of the questions

### To connect to Wi-Fi:

Select "DOEGUEST" from the list of available wireless networks and enter the shared key when prompted, "energy.wireless"

You will now be connected to the internet.





**DR. DONALD COOK**  
NNSA Former Deputy Administrator  
for Defense Programs

## SYMPOSIUM DAY 1 OPENING SPEAKER

Dr. Cook was appointed to the Deputy Administrator for Defense Programs position by President Obama. Cook was sworn in as NNSA's 5th Deputy Administrator in June 2010. He was responsible for managing the U.S. Nuclear Security Enterprise of laboratories and manufacturing facilities through 2015.

Prior to his appointment to NNSA, Dr. Cook served as Managing Director and Chief Executive Officer of the Atomic Weapons Establishment in the United Kingdom from 2006 to 2009. In this capacity, he was accountable for AWE's performance on the contract with the UK Ministry of Defence, which includes support of the UK Trident warheads and development and sustainment of capability in nuclear weapon design, engineering development, manufacturing, qualification, assembly, transport, support in service, and finally, decommissioning, dismantlement, and disposal. AWE has an annual budget of \$1.2 billion and an employee workforce of 5,000.

From 1977-2005, Dr. Cook worked in Pulsed Power Sciences, Microtechnologies, Infrastructure, and Security at Sandia National

Laboratories in Albuquerque, New Mexico. From 1999-2005, he was Director of the MESA Program Center, accountable for design and construction of the Microsystems and Engineering Sciences Applications (MESA) complex. In 2003, he assumed Program Director responsibilities for Sandia's Infrastructure Program and for Sandia's Safeguards and Security Technologies Program.

From 1977-1999, Dr. Cook led efforts in pulsed power accelerator design and experimentation, fusion research, hydrodynamics, radiography, diagnostic development, and computational code development. He managed the Sandia Fusion Research Department from 1984-1993 and was Director of Pulsed Power Sciences from 1993-1999. Work during this period included construction and development of a number of accelerators, including the Z-machine.

Dr. Cook is a graduate of the University of Michigan and the Massachusetts Institute of Technology, and a Fellow of the American Association for the Advancement of Science (AAAS) and the Institute of Physics (IOP). He is married to the former Margaret Ann Kramer, with two grown daughters, Julia and Cynthia.





**DOUG COMSTOCK**  
Deputy Chief Financial Officer for  
Integration, NASA

## SYMPOSIUM DAY 1 KEYNOTE SPEAKER

Mr. Doug Comstock is the Deputy Chief Financial Officer for Integration at NASA headquarters. He was previously Director of the Cost Analysis Division in the Office of Evaluation at NASA HQ, as part of the Office of the Administrator. In that role he was responsible for cost estimating policy, providing cost analysis capabilities and tools for NASA, developing new and improved methods for cost analysis through research, as well as cost analysis consulting to programs and projects and cost analysis for agency studies.

Mr. Comstock was previously the Director of NASA's Innovative Partnerships Program (IPP), responsible for directing the IPP portfolio of technology investments and partnering mechanisms including Small Business Innovative Research, Small Business Technology Transfer Research, the Centennial Challenges and the Innovative Partnerships Seed Fund. Additionally, he was responsible for intellectual property management and technology transfer, and for encouraging and facilitating partnerships with the emerging commercial space sector including the agency's purchase of emerging commercial services.

Mr. Comstock previously served as the NASA comptroller, responsible for the preparation, tracking, presentation and defense of

NASA's budget to the White House Office of Management and Budget (OMB) and the Congress. As the founding director of NASA's Strategic Investments Division, he was responsible for integrating NASA's strategic planning and program analysis supporting budget decisions into a single organization. Before coming to NASA, Comstock spent four years as a program examiner in OMB, with responsibility for NASA's human space flight activities, biological and physical research and personnel. Prior to his government service, he was Director of Engineering with the Futron Corporation, a Bethesda, Md.-based technology consulting firm, and began his career with General Dynamics Space Systems Division, conducting preliminary design and systems analysis for numerous aerospace systems, from strategic defense to advanced space transportation.

Mr. Comstock has undergraduate degrees from the University of Washington in both mechanical engineering and architecture. He did his graduate studies at the Massachusetts Institute of Technology and received Masters degrees in both aeronautics and astronautics, and technology and policy.

He resides in Ashburn, Va. and is married to the former Susan Louk. They have two children.



## GARY BLISS

Director, Performance Assessments and Root Cause Analyses (PARCA), in the Office of the Assistant Secretary of Defense for Acquisition

Mr. Gary R. Bliss is the Director, Performance Assessments and Root Cause Analyses (PARCA), in the Office of the Assistant Secretary of Defense for Acquisition. PARCA carries out performance assessments of Major Defense Acquisitions Programs (MDAPs) and conducts root cause analyses for MDAPs with Nunn-McCurdy breach status or when requested by senior Department of Defense (DoD) officials.

Mr. Bliss previously held the position of Deputy Director, Enterprise Information and Office of the Secretary of Defense (OSD) Studies in the Office of the Undersecretary of Defense for Acquisition, Technology and Logistics (AT&L). His responsibilities included oversight of the five OSD-funded Federally Funded Research and Development Centers, the OSD's university research program, as well as review and development of innovations to overhaul the AT&L enterprise management systems.

Earlier in his career, Mr. Bliss served thirteen years as the Director of Office of the Director, Program Analysis & Evaluation Weapon System Cost Analysis Division (WSCAD). WSCAD's ten staff members constitute one of the two offices dedicated to OSD Cost Analysis Improvement Group (CAIG) functions,

and is responsible for the preparation of independent development and procurement cost estimates for major systems that range from munitions (e.g., tactical missiles) through platforms (e.g., helicopters, submarines, fighter aircraft, tanks, etc.). As such, Mr. Bliss has been a key player in DoD's most important system decisions by the Services, OSD and the Congress.

Generally recognized in both industry and government as a leading authority on the economics of defense procurement, Mr. Bliss has an established track record in institutional reform and enterprise reengineering. He is an experienced lecturer, often speaking to varied audiences on such topics as:

- Management information system governance and reengineering
- Manufacturing enterprise reengineering
- Acquisition institutional reform

Owing to this expertise, Mr. Bliss has been hosted by the governments of Australia, Taiwan, Japan, and the United Kingdom to lecture their staffs on matters of defense acquisition.

Mr. Bliss has a BA, Mathematics and Economics (Highest Honors in Economics) from College of William and Mary.



**A.C. CHARANIA**  
 Manager of Advanced Programs,  
 Blue Origin

## SYMPOSIUM DAY 2 KEYNOTE SPEAKER

Mr. A.C. Charania works on the Business Development and Strategy team for Blue Origin, LLC, a developer of vehicles and technologies to enable human space transportation. At Blue Origin, he is Manager of Advanced Programs.

Mr. A.C. was formerly based in the Los Angeles metropolitan area as Senior Director of Strategy and Business Operations at Virgin Galactic. For over four years, he was involved in developing the entire LauncherOne business plan, maturing Virgin Galactic's roadmap with its advanced concepts team, company financial modeling, capture/proposal management (including winning a NASA Venture Class Launch Service contract), interfacing with the global space launch insurance community, and supporting multiple C-level technical partnership transactions for Virgin Galactic. He was one of the leaders involved in changing the overall air-launch architecture to one that uses the 747-400 as the carrier aircraft. He helped to negotiate one of the largest commercial procurements of launches in history (OneWeb's launch contract with Virgin Galactic). He was also on the core due diligence team for Virgin Group's investment in the OneWeb global satellite constellation. For the first two years at Virgin Galactic he

was based in Washington, D.C. where he also supported corporate lobbying and government agency interaction.

He was a visionary/founder/early employee of three aerospace start-ups (SpaceWorks Enterprises, Generation Orbit and Terminal Velocity Aerospace). Working at SpaceWorks for over twelve years, he was involved in multiple advanced concepts studies that included reusable launch vehicles, in-space transportation systems, human exploration studies, and planetary defense/asteroid missions. At SpaceWorks he helped to incubate Generation Orbit and Terminal Velocity Aerospace, also serving as CEO of Generation Orbit. He has extensive experience in cost and economic modeling of space systems. He also has experience in export compliance, having successfully executed projects with overseas companies from Japan and South Korea. He is a member of the International Astronautical Federation (IAF) Entrepreneurship and Investment Committee. He earned an M.S. and B.S. in Aerospace Engineering from the Georgia Institute of Technology with a specialization in systems design and optimization. He also earned a B.A. in Economics/Mathematics from Emory University.

CECOP SYMPOSIUM DAY 1 SCHEDULE

7:30am - 8:30am	Check-In	
8:30am - 8:45am	Welcome and Introduction to the Cost Estimating Community of Practice (CECOP)	<b>Host/MC: Phil Forsberg, NA-143 &amp; Fana Gebeyehu-Houston, NA-143</b> Vision of cost estimating at NNSA, the commissioning of the Defense Programs Cost Improvement Initiative, and the resulting implementation which includes the creation of Cost Estimating Analysis Group (CEAG).
8:45am - 9:15am	Kick-off Speaker: Defense Program Cost Improvement Initiative	<b>Dr. Don Cook, Former NNSA Deputy Administrator for Defense Programs</b> Cost improvements within the Nuclear Security Enterprise (NSE). A look at our history - past, present, and future vision in Defense Programs cost estimating and analysis.
9:15am - 10:15am	Perspectives from the Nuclear Security Enterprise: CEAG Council Panel	<b>Panel: CEAG Council</b> Members of the Cost Estimation Analysis Group (CEAG) Council will describe CEAG and provide perspectives on cost estimation challenges and paths for improvement, both at their sites and across the Nuclear Security Enterprise.
10:15am - 10:30am	Break	
10:30am - 11:15am	U.S. Government Accountability Office (GAO) Cost Estimating Guidance	<b>Jennifer Leotta, Government Accountability Office (GAO)</b> An overview of the GAO, their role in the context of the broader government cost estimation community, and observed best practices throughout government. They will provide an update of their GAO Cost Estimating Handbook.
11:15am - 11:45am	NNSA Federal Program Office perspectives of Risk Management	<b>Glenn Bell, NA-18</b> Discussion of risk vs. uncertainty from the perspective of the FPO.
11:45am - 12:00pm	Break	Break for lunch
12:00pm - 1:00pm	Keynote Speaker: Excellence and Challenges in Cost Estimating at NASA	<b>Doug Comstock, National Aeronautics and Space Administration</b> Factors used at NASA to reach decisions on funding levels: Data, Policy & Process, and Community.

1:00pm - 1:15pm	Community of Excellence for Risk Management	<b>Theodore Johnson, NA-18</b> The purpose of the Risk Management Community of Excellence is to promote collaboration and the use of risk management best practices by bringing together the people, processes, and methodologies ensuring consistent use and dissemination of risk management knowledge throughout Defense Programs.
1:15pm - 2:00pm	Challenges of Using Historical nuclear weapon data for estimating and analysis	<b>Terry Josserand, Sandia National Laboratories</b> Discuss an approach using US nuclear weapon historical and projected data to inform estimating and analysis and to identify areas to collaborate.
2:00pm - 2:15pm	Break	
2:15pm - 3:15pm	Contingency, Management Reserve, Risk, and Uncertainty: A Historical Perspective	<b>Ian Bailey, NA-143 and Carol Meyers, Lawrence Livermore National Laboratory</b> The practice of quantifying risks and uncertainties to generate contingency and management reserve estimates has evolved significantly over the past decade at NNSA. We discuss the progress that NNSA has made in better defining and capturing contingency, management reserve, risk, and uncertainty, from the W76 program to the B61-12 and W88 Alt 370.
3:15pm - 4:00pm	Nuclear Security Enterprise Site perspectives of Risk vs. Uncertainty	<b>Diane Koehne, Savannah River Nuclear Solutions</b> Description of the language of risk and uncertainty (using feedback from BCR review) used at sites and across the enterprise. Will provide definition, education, and suggestions for best practices.
4:00pm - 4:15pm	CECOP Day 1 Wrap-up	<b>Frank Lewis, NA-143</b>
4:15pm - 4:20pm	Announcement of Happy Hour and directions	<b>Phil Forsberg, NA-143</b>
4:30	No Host Happy Hour	<b>Holiday Inn Capitol   550 C Street S.W., Washington, DC 20024</b> Attendees, Significant Others, and Guests are all welcome.

CECOP SYMPOSIUM DAY 2 SCHEDULE

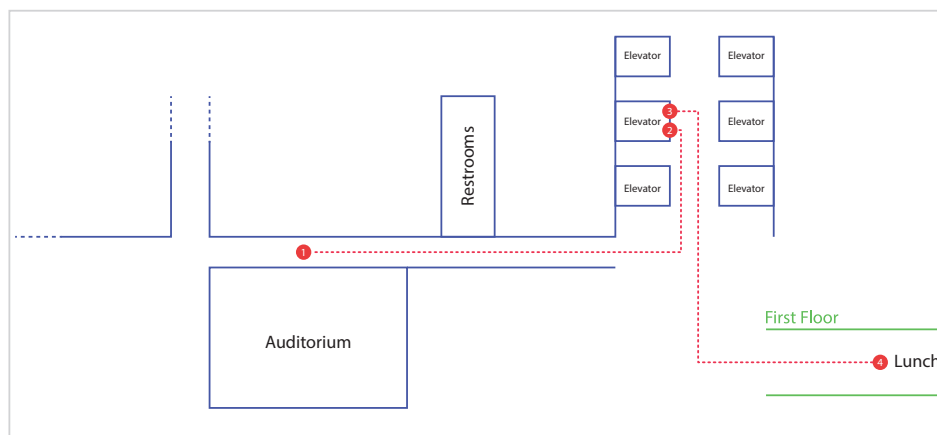
7:30am - 8:30am	Check-in for late arrivals	
8:30am - 8:45am	CECOP Day 2 Welcome	<b>Phillip Forsberg, NA-143</b> Welcome   Recap of Previous Day   Agenda Overview
8:45am - 9:15am	Historic Cost Estimation at DoD	<b>Gary Bliss, Office of Performance Assesments and Root Cause Analyses, Office of the Assistant Secretary of Defense for Acquisition</b> Discussion of why and how estimates fail.
9:15am - 9:45am	AACE International	<b>Michael Nosbisch, Hill International</b> High level overview of the organization and information education and professional development with respect to cost estimating.
9:45am - 10:15am	International Cost Estimating and Analysis Association (ICEAA) Overview	<b>Megan Jones, International Cost Estimating and Analysis Association</b> High level overview of the organization and information education and professional development with respect to cost estimating.
10:15am - 10:30am	Break	
10:30am - 11:00am	The Future of CECOP	<b>Barbara Surbey, Sandia National Laboratories</b> Review vision of CECOP including an outline of ideas for the path forward followed by an open discussion with the group. Include questions like what participants want to get out of CECOP, what sub-teams could be developed to work on site-wide issues, and a communication plan. Plan to review some results of the surveys given throughout the conference (e.g., survey question on topics of interest could be used to discuss the sub-teams).
11:00am - 11:30am	Office of Cost Estimating and Program Evaluation (CEPE) Independent Cost Estimating Methodology & Cost Analysis Requirements Description	<b>Harlan Swyers, NA-1.3</b> An overview of CEPE's role in the broader NNSA/DOE cost estimation community. Discuss the Independent Cost Estimate (ICE) Methodology and the CARD Requirement.

11:30am - 12:00pm	<b>The Relationship between Cost Estimating &amp; Earned Value Management</b>	<b>Rick Bradshaw, B61-12</b> The practical aspects of implementing EVM in the field (and across separate entities within the enterprise).
12:00pm - 12:15pm	<b>Break</b>	Break for lunch
12:15pm - 1:15pm	<b>Keynote Speaker: Lessons in Cost Estimating of Aerospace Concepts</b>	<b>A.C. Charania</b> An overview of cost estimating lessons learned of various aerospace concepts based on practices within private industry.
1:15pm - 1:45pm	<b>Methodology Improvement: Policy, Process, Products and Participants</b>	<b>Phil Chamberlin, Sandia National Laboratories</b> Methodology Improvement is a key focus area and operational objective identified in the CEAG Charter. This briefing, uses a system centric view, to explore the concepts of cost estimate precision and accuracy and the roles of policy process products and participants.
1:45pm - 2:15pm	<b>SSMP Cost Estimating Methodology for Nuclear Weapon Life Extension Programs</b>	<b>Matt Proveaux, NA-143</b> Process overview for estimating the development and production of nuclear weapons based upon historical costs.
2:15pm - 2:30pm	<b>Break</b>	
2:30pm - 3:15pm	<b>CECOP for FY17/FY18</b>	<b>Barbara Surbey, Sandia National Laboratories</b> Wrap of the Symposium. Open discussion among attendees and planners on expectations and recommendations for next Symposium.
3:15pm - 3:30pm	<b>Closing Remarks</b>	<b>Dr. William Conwell, NA-14</b>



## CECOP LUNCH/DIRECTIONS

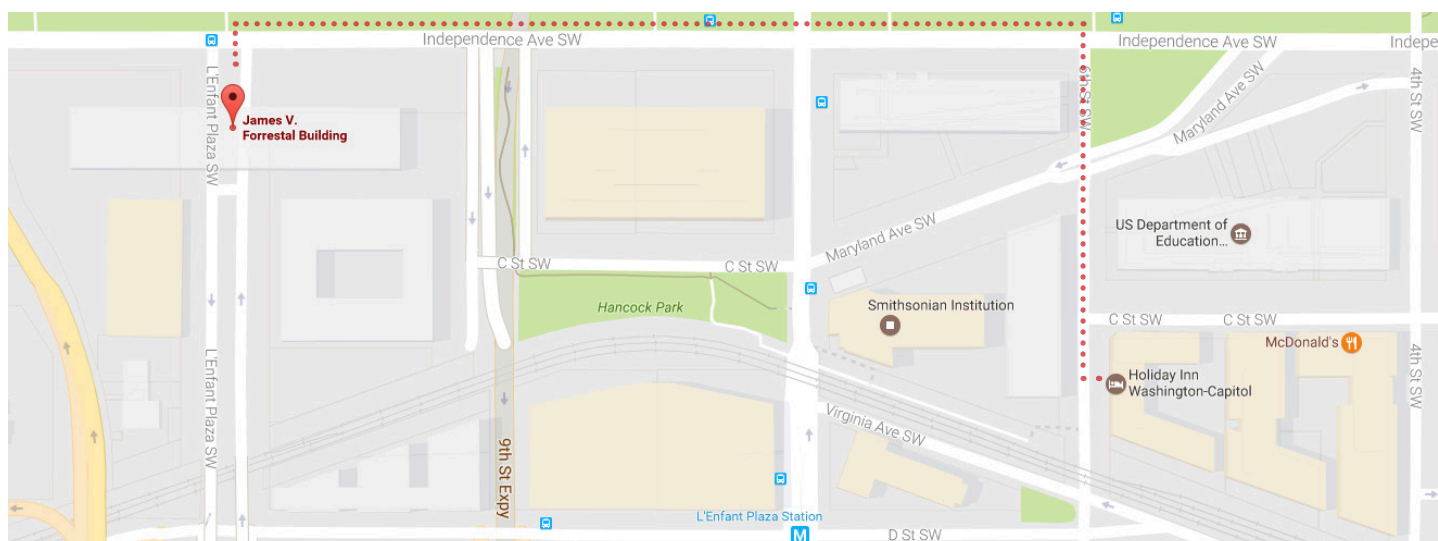
Lunch will be served in 1E-245 room. The Keynote speakers will give their address during lunch. Lunch will be an Assortment of Sandwiches, Fruit Salad, Bag of Chips, Cookie and a beverage.



- 1 Start at Auditorium and walk past the restrooms towards the elevator bank.
- 2 Take the elevator down to the first floor.
- 3 Exit the elevators and take a LEFT into the nearest hallway.
- 4 Arrive at Room 1E-245 for Lunch.

## CECOP SYMPOSIUM HAPPY HOUR

No Host Happy Hour will be held on Tuesday, March 21, 2017 at Holiday Inn Washington-Capitol in their 21st Amendment Bar & Grill starting at 5:30. The Holiday Inn Address is 550 C Street SW Washington, DC 20024 between 6th Street & 4th Street.



## CECOP SYMPOSIUM PRESENTERS 2017

### PHILLIP FORSBERG NNSA, NA-143

Phillip Forsberg is a nuclear engineer and cost analyst who has worked for NA-143 since July 2015. He joined DOE through the NNSA Graduate Fellowship Program through Pacific Northwest National Laboratories. He is currently working on the Exascale Computing Facility modernization Analysis of Alternatives, the Plutonium Modules AoA, the Domestic Uranium Enrichment cost review, and the Stockpile Stewardship and Management LEP cost estimates. He is the NNSA headquarters Cost Estimating Community of Practice (CECOP) and Cost Estimating Analysis Group (CEAG) site representative. Mr. Forsberg completed his MS in Health Physics and Nuclear Engineering from Purdue University in 2014 and 2016, respectively, and is currently a PhD candidate in nuclear engineering at Purdue University.

### FANA GEBEYEHU-HOUSTON Director, Office of Cost Policy and Analysis NA-143

Ms. Houston has spent her federal career implementing transparency and program management initiatives for the federal government. Most recently, she established an independent cost estimating and analysis organization for the United States nuclear weapons program that has received recognition for transparency and effectiveness from our nation's National Laboratories, the Deputy Administrator for Defense Programs, the Office of Management and Budget, and the Government Accountability Office. Her office's technical approach to long-range forecasting of nuclear stockpile costs

headlined the September/October 2015 Cost Engineering Journal of the Association for the Advancement of Cost Engineering. Ms. Houston lives, works, and rows in the District of Columbia with her husband and son.

### DAN LINEHAN Consolidated Nuclear Security

Mr. Linehan is currently the CNS LEP director within Stockpile Programs and has programmatic responsibility for LEP's at both Pantex and Y-12. Dan has held multiple technical and management positions for over 25 years at Y-12, Oak Ridge National Laboratory, and in private industry. Mr. Linehan holds an MBA and BS and MS degrees in Electrical Engineering from the University of Tennessee, is a licensed Professional Engineer, and is certified as both a Project and Program Management Professional through PMI.

### DR. RUSSELL SKOCYPEC Sandia National Laboratories, Systems Analysis and Decision Support Group

Dr. Skocypec leads Sandia's Systems Analysis and Decision Support Group, dedicated to generating insight through objective systems analysis and research for decisions on key nuclear deterrence and national security challenges. A significant area of emphasis is cost estimation and analysis. He is a member of the CEAG Council. Over a 32-year career at Sandia, Dr. Skocypec has held a variety of programmatic leadership positions spanning nuclear deterrence; energy, climate and infrastructure security; and homeland security. His technical contributions include establishing capabilities in Cognitive Science and Fire

Science. He has led Sandia's Engineering Sciences Research Foundation, and Robotics Technologies. He has contributed to DoD strategies and technologies to counter insurgencies and Improvised Explosive Devices. Dr. Skocypec has advised a number of university engineering departments, the Department of Defense and the National Science Foundation; and has had leadership roles in the American Society of Mechanical Engineers. Russ received his B.S., M.S., and Ph.D. in Mechanical Engineering from the University of Illinois at Champaign-Urbana.

### RODNEY REGO Kansas City National Security Campus (KCNSC)

Mr. Rego started his professional career commissioned through the U.S. Army as a Civil Engineer. He refocused his career to Finance shortly after he earned a BS in Accounting from the University of Wisconsin. Later he targeted cost estimating, building 20 years of experience on Government programs.

During his NSE tenure, Mr. Rego has served as a core team member on the Defense Programs Cost Improvement Initiative (DP CII); a core team member for the NNSA response to NDAA2014, Sec. 3128 [Plan For Improvement And Integration Of Financial Management Of Nuclear Security Enterprise]; and is currently enrolled in War College.

### JENNIFER LEOTTA Sr. Operations Research Analyst, US Government Accountability Office

Jennie Leotta is Senior Operations Research Analyst for the Applied Research and Methods Team at the Government

Accountability Office (GAO). She is a responsible for performing cost, schedule, analysis of alternatives, and Earned Value Management analyses to support audit findings on a wide range of government programs. Before joining the GAO, Jennie worked for the Department of Homeland Security and the Navy, developing and analyzing cost estimates for a wide variety of programs. She has also worked as a survey statistician at the US Census Bureau. Ms. Leota holds a Bachelors degree in Quantitative Finance from James Madison University and a Masters degree in Economics from George Mason University. She also is a Certified Cost Estimator/Analyst (CCEA®) from ICEAA and is DAU Cost Estimating/Financial Management Level III.

### **GLENN BELL** NNSA, Office of Systems Engineering and Integration (NA-18)

Mr. Bell has many years of System Engineering and Program Management experience within the Nuclear Weapon Complex at Sandia and NNSA. Mr. Bell spent 11 years at Sandia where he worked in Experimental Testing and in Weapon System Development. He worked on the W9, B61-11, SWPP and other advance weapon projects. He was part of special Sandia team that was trained in System Engineering and helped pioneer several practices we use today such as PRTs. While at Sandia, he was invited to consult the UK on Test & Evaluation and System Engineering principles.

He also led a team in studying the B61 aging and modern Use Control.

### **THEODORE JOHNSON** NNSA, NA-18

Mr. Johnson is a Senior Systems Engineer with more than 25 years of experience in Project Management and Technology Development. In 2014, Mr. Johnson returned to the Office of Defense Programs where he has been developing the overall policy guidance for implementing the principles of the systems engineering and project management within the complex. Currently, he is leading an effort to promote collaboration and the use of risk management best practices throughout DP by bringing together the people, processes, and methodologies. Mr. Johnson holds an undergraduate degree in Electrical Engineering from the Georgia Institute of Technology and a Master of Science in Systems Engineering and Management from George Washington University.

### **TERRY JOSSERAND** Sandia National Laboratories, Nuclear Security Enterprise and Cost Analysis Department

Terry Josserand is a Senior Member of Technical staff within the Nuclear Security Enterprise and Cost Analysis Department at Sandia National Laboratories. Mr. Josserand came to Sandia with a background in international finance and supply chain economics. During his time at Sandia,

he has continued his graduate studies in international nuclear policy and has certifications in Project Management, Risk Management, and is a Microsoft Certified Technology Specialist. Over the past five years, Mr. Josserand has been involved in developing and reviewing estimates for nuclear weapon systems, Secure Transportation assets, satellite programs, and other R&D efforts as well as numerous cost-focused studies and analyses.

### **IAN BAILEY** NA-143 (NNSA Contractor) Sol Oriens, LLC

Ian Bailey is a senior technical advisor with more than 16 years' experience in the NSE. Since 2008, he has provided program management support and helped lead the formal acquisition cost estimate process for the B61-12 LEP, currently planned at \$7.3B over 13 years. He also developed novel system-driven technology evaluation approaches to support NNSA technology funding evaluation across seven NSE Management & Operations Contractors; and as a special team member, evaluated NSE-wide cost estimation methods and more effective risk-adjusted nuclear stockpile planning approaches, to improve cost and risk management performance as well as respond to GAO criticisms of prior NNSA programs' management. Mr. Bailey graduated with honors in Economics from Harvard and has an MBA from Dartmouth's Tuck School.

**CAROL MEYERS**

Lawrence Livermore National  
Laboratory, Life Extension  
Program Analytics Lead

Carol Meyers is a mathematician at Lawrence Livermore National Laboratory, working in the area of nuclear enterprise modeling, particularly cost and benefit modeling. She maintains a suite of cost, benefit, mission effectiveness, and workforce planning models for LLNL and is a member of the site W80-4 program office. She is a site representative to the Cost Estimation Analysis Group (CEAG), a member and W80-4 study lead on the Joint Integrated Lifecycle Surety (JILS) team, and frequently engages with the Enterprise Modeling and Analysis Consortium (EMAC). She has a PhD in Operations Research from MIT and a BA in Mathematics from Pomona College.

**DIANE KOEHNE**

Savannah River Site – SC, Savannah  
River Nuclear Solutions, LLC -  
Enterprise Risk Manager

Diane Koehne is the manager and program director of the Enterprise Risk Management program at SRS. Ms. Koehne has held multiple technical and management positions for over twenty years at SRS and as a subcontractor to the DOE at LANL, Y-12 and Hanford in the field of Systems Engineering. She holds a BS degree in Mechanical Engineering and a BS in Nuclear Science. Over the past two years, Ms.

Koehne has been involved in developing and implementing the Enterprise Risk Program at SRNS. Ms. Koehne has worked with both DOE-EM and NNSA on multidiscipline projects. She has introduced an active risk management program to SRS that incorporates technical, programmatic; as well as Enterprise and Infrastructure Risk Management.

**FRANK LEWIS,  
NNSA, NA-143**

Frank Lewis is a senior cost analyst at the National Nuclear Security Administration's (NNSA) Office of Cost Policy and Analysis (NA-143). He received his B.S. in Physics from Purdue University and his M.S. in Physics from the Air Force Institute of Technology. He is a retired United States Air Force (USAF) pilot with 22 years of military service reaching the rank of Lieutenant Colonel. He was the Deputy Director for the Signals Analysis Division of the USAF Foreign Technology Division prior to working for the RAND Corporation. He has extensive experience as a Federal Civilian cost estimator with both the Department of Defense (DoD) and the Department of Energy (DoE). He worked for 16 years with the DoD OSD PA&E CAIG and TACAIR producing estimates on a wide variety of weapon systems and aircraft. He also has 9 years of cost estimating experience with DoE and NNSA with cost estimates for strategic capability and nuclear weapons systems. He resides in Vienna, Virginia with his wife, Linda.

**MICHAEL NOSBISCH  
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Mr. Nosbisch has over 28 years of experience in project management and controls. He has worked for several of the leading engineering, procurement, and construction (EPC) firms in the industry. From 2009 to 2015, Mr. Nosbisch managed successful consulting practices at both SM&A and Project Time & Cost, LLC, providing cost engineering, estimating, and earned value management (EVM) support to multiple federal agencies and their contractors. He is also a Fellow at AACE International, having been a member for more than 15 years--during this time he has earned numerous professional certifications in addition to serving as President of the Association from 2011 to 2012 and the current Chair of AACE's Education Board. He has also been an active member of both NDIA's Integrated Program Management Division (IPMD) and the Energy Facility Contractor's Group's (EFCOG's) Project Delivery Working Group (PMWG), and currently serves as a Director for the Orange County Post of the Society of American Military Engineers (SAME). Mr. Nosbisch is a Certified Cost Professional (CCP); Planning & Scheduling Professional (PSP); Project Management Professional (PMP, inactive). Mr. Nosbisch has earned a Masters of Engineering Management (MEM) from The George Washington University and a Bachelors in Geology from University of Rochester.

### MEGAN JONES

#### International Cost Estimating and Analysis Association

Megan Jones is Executive Director of the International Cost Estimating & Analysis Association (ICEAA), a nonprofit organization represented by more than 20 chapters nationwide and international affiliates in Australia, Japan, Canada, and the United Kingdom. ICEAA strives to promote and to enhance the professional growth of our members in cost estimating, cost analysis, and allied fields by providing publications, educational opportunities, and forums through which principles and techniques are developed, reported, and discussed. Megan joined the ICEAA team in January of 2014, bringing 15 years of experience in nearly every aspect of association management from event planning to strategic planning, collaborating with internal and external teams, and building relationships with volunteer leadership and vendors.

### BARBARA SURBEY

#### Nuclear Security Enterprise & Cost Analysis, Sandia National Laboratories

Barbara Surbey is a Technical Systems Analyst at Sandia National Laboratories/ NM working in the areas of cost analysis and futures analysis supporting Nuclear Weapons (NW) programs. She has worked at SNL/NM for over 35 years. Half of her

service time was in Facilities Maintenance and Operations providing civil/structural designs and cost estimates, technical project management, construction management, and construction inspection. She also has served numerous years in Strategic Partnership Projects (SPP) Mission Assurance developing project management and systems engineering procedures as well as developing tools for documenting and automatically reporting project status to management in real time. She has also worked in various areas supporting NW programs at SNL and the Nuclear Security Enterprise (NSE). Barbara leads the Nuclear Weapons Cost Community (NWCC) for the Senior Managers Steering Committee (SMSC) at Sandia which is chartered to improve consistency and quality of cost product, services, and activities. She was also a key member of the CECOP Symposium Planning & Implementation Committee. Barbara holds an MBA in Management Information Systems, a BS in Business Management, and an Associate's in Engineering Degree.

### HARLAN "HAL" SWYERS

#### Senior Operations Research Analyst, Office of Cost Estimating and Program Evaluation, NA-1.3, NNSA

Mr. Swyers is a veteran of the United States Navy where he qualified as a nuclear propulsion trained Surface Warfare Officer (SWO(N)) and deployed multiple times while

serving as a division officer onboard the USS Valley Forge (CG-50) and USS Dwight D. Eisenhower (CVN-69). Prior to coming to NNSA, he was a federal civilian working for Headquarters Marine Corps (HQMC), Program Analysis and Evaluation (PA&E) as an Operations Research Analyst/Cost Analyst. In addition to his federal service, he spent over a decade working for a private defense contractor in support of multiple DoD organizations where he gained extensive expertise in the areas of missile defense, strike operations, undersea warfare, campaign analysis, modeling and simulation, expeditionary energy, force structure analysis, requirements development processes, software development, PPBE processes and cost estimation. He has also been a store manager for a major retailer. He is the son of LCDR Harry Swyers, USN(Ret), eponym of Swyers point in Antarctica, and is married with two children. Mr. Swyer is a Certified Cost Estimator/Analyst (CCEA) and has holds a Masters of Business Administration from University of Maryland University College (UMUC), a Master of Science in Environmental Management from UMUC, and a Bachelor of Science in Mechanical Engineering from Marquette University

### FREDERIC (RICK) BRADSHAW

#### High Bridge Associates

Rick Bradshaw has over 34 years of project management, controls, and engineering

experience on commercial and government nuclear and environmental projects and programs internationally. He specializes in the development and implementation of project management and control systems for large nuclear projects. Most recently he served as the Project Controls Manager and was the primary architect for the Project Controls System on the B61-12 LEP that incorporates an EIA-748 compliant Earned Value Management System (EVMS). He served in a similar capacity on the International Thermonuclear Experimental Reactor Project in Southern France, helping to develop and implement their EVMS, integrating contributions from 6 countries plus the European Union while fulfilling the Project Controls Manager role for Plant Systems (fuel storage and supply, electrical power supply, cooling water, etc.). He completed his BS in Chemistry in 1979 and MS in Chemical Engineering in 1983, both from the University of Utah. He has maintained his Project Management Professional certification since 1994.

#### **PHIL CHAMBERLIN,** Sandia National Laboratories, Detail to NNSA NA-143

Phil Chamberlin is a Principal Member of Technical Staff within the Nuclear Security Enterprise and Cost Analysis Department at Sandia National Laboratories. Mr. Chamberlin has over 20 years of cost

estimating and project controls experience within the disciplines of building construction, environmental management, space systems, advanced technology development and nuclear weapons. He is currently on detail assignment to NA-143, NNSA Office of Cost Policy and Analysis where he has led teams reviewing baseline cost estimates for the B61-12, the W88 ALT370 and has participated in cost estimating related policy analysis and requirements development.

#### **MATTHEW PROVEAUX** NNSA, NA-143

Matthew Proveaux is a program analyst with the National Nuclear Security Administration, Office of Defense Programs where he provides engineering and analytical expertise to support U.S. national security programs. Recent projects include the development of a cost estimate for a complex nuclear material processing capability at Los Alamos National Laboratory, production of a novel Monte Carlo algorithm for schedule analysis for an NNSA manufacturing capability, and the development of a parameter-based model to estimate production costs for armored vehicles. Mr. Proveaux is currently detailed to Lawrence Livermore National Laboratory's Weapons Physics and Design Division where he has been developing and testing a hydrodynamic model to

evaluate phenomena of interest for nuclear weapon life extension programs. Mr. Proveaux holds a bachelor's degree in Physics with honors from the University of California at Davis and a master's degree in Nuclear Engineering from the University of California at Berkeley.

#### **DR. WILLIAM "DALE"** CONWELL Assistant Deputy Administrator NA-14

As the Assistant Deputy Administrator for Program Integration, Dr. Conwell leads the implementation of sound financial and business management practices in the development of annual and multi-year program plans, fully integrated within and across programs, and supported by risk-based cost policies and analyses which accurately reflect the work to be performed. In his previous experience as NA-14's Director, Office of Strategic Planning and Programming (NA-141) he was responsible for writing the Stockpile Stewardship and Management Plan and conducting the Planning and Programming process in Defense Programs. Prior to joining NNSA in 2009, Dr. Conwell retired from the Army as a Lieutenant Colonel. A veteran of Operation Desert Storm and Operation Iraqi Freedom, he served as a PATRIOT Missile Battery Commander and an Avenger Missile HQ Battery Commander.

## CEAG COUNCIL

The 1st Annual CECOP Symposium would not have been possible without the guidance and dedication of the CEAG Council and CECOP Planning Committee. If you would like to become more involved, please reach out to a Council Member from your respective Site or email [cecop@nnsa.doe.gov](mailto:cecop@nnsa.doe.gov).

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