



**U.S. Department of Commerce
Civil Nuclear Trade Advisory Committee (CINTAC) Meeting**

Seventh Charter, 2020-2022

Thursday, September 30, 2021, 9:00am - 2:00pm EDT

Virtual Meeting: MS Teams

Minutes

9:00 – 9:05

Welcome and Roll Call

- Jonathan Chesebro, Designated Federal Officer of the CINTAC, U.S. Department of Commerce (DOC), welcomed meeting participants and took roll call.

9:05 – 9:10

Review of Meeting Goals

- Jeff Harper, CINTAC Chair and Ralph Hunter, CINTAC Vice Chair reviewed the CINTAC Value Creation Matrix, which will be used to track proposed subcommittee's recommendations and status of recommendations sent to the Secretary.

9:10 – 11:30

CINTAC Subcommittee Readouts

- Subcommittees provided readouts of their charters and proposed deliverables for consideration by the full CINTAC.
 - 9:10 – 10:10: Climate Change and Economic Growth Subcommittee (Carol Berrigan, Chair)
 - Gave overview of subcommittee charter which focuses on climate and just transition aspects, which are important to current Administration.
 - Three focus areas: 1) gain recognition of nuclear's attributes to support climate change goals; 2) ensure nuclear energy is fairly treated in climate finance initiatives; 3) examine enablers around nuclear and climate that will support nuclear's ability to operate in the global market. First proposed action is the COP26 letter which asks that nuclear energy is visibly present at COP.
 - CINTAC members discussed the letter and provided comments/questions, including asking if specific leaders should be contacted by Secretary Raimondo, if the EU taxonomy should be mentioned in the letter.
 - CINTAC voted to approve the letter with minor discussed amendments.



- Sagatom Saha, Senior Advisor, U.S. Department of State, Office of the Special Presidential Envoy for Climate (SPEC) provided a briefing on U.S. Government COP26 goals.
 - SPEC views nuclear as a climate solution and Secretary Kerry and DOE Secretary Granholm have noted this. Interagency discussions underway to discuss nuclear as a climate solution.
 - At COP26, USG working to highlight nuclear and considering how to leverage the COP26 U.S. Pavilion for events. Several events planned on margins of COP – SPEC happy to support nuclear-related events being considered. After COP, want to make sure nuclear is a climate solution and work with IAEA, foreign heads of state, and others to take action on this.
 - Noted DOC/ITA’s Clean Tech Export Competitiveness Strategy, an interagency effort to help countries address the climate crisis through clean tech exports (including nuclear)
 - Discussion:
 - CINTAC member asked if it would be helpful to use COP to highlight current energy challenges in Europe (high electricity prices, focus on energy diversity/security). European Commission Kadri recently said EU needs to build more wind power to address climate crisis (not the solution if wind not blowing). SPEC representative noted that USG wants renewables and nuclear to be complimentary to each other. Need immediate emissions reductions and deployment of technology not currently available to achieve 2050 decarbonization goals. USG cooperating with private sector, multilateral organizations, and others to achieve climate goals.
 - Industry asked about USG’s post-COP26 plans. SPEC representative noted that focus is on COP now – will determine where additional progress can be made after COP (e.g. Clean Energy Ministerial, Nuclear Power Ministerial, and other forums). Industry noted that nuclear should be fairly treated in climate finance mechanisms and asked how U.S. is working to ensure that nuclear is not cut out of these mechanisms? A CINTAC letter on the taxonomy was suggested.



- 10:10 – 10:50: Deployment Subcommittee (Gary Wolski, Chair)
 - Reviewed subcommittee charter - aims to assess domestic and international market opportunities for U.S. civil nuclear supply chain, identify key export markets, and support the safe deployment of reactors. Three focus areas (climate, foreign policy, and jobs).
 - Reviewed a draft SWOT analysis of market opportunities and challenges that subcommittee is developing. Weaknesses: competition from state-owned enterprises (SOEs), lack of U.S. back-end solution to used fuel, NRC regulatory process (impacts timing to market), and challenges with negotiating bilateral trade agreements. Opportunities: using nuclear to address climate goals. Threats: support for civil nuclear energy fragile in many countries, nuclear expensive and takes a long time to develop, poorly executed projects instill fear in other potential projects. SWOT analysis to be shared with full CINTAC for their input.
 - Subcommittee proposed drafting a letter on U.S.-Canada cooperation (recommending cooperation on HALEU and domestic content requirements).
 - Subcommittee working groups discussing focus areas and will report out to full committee in mid-December.
 - Subcommittee working groups spoke about their work on Project Offering Scope/Financial Considerations, Supply Chain/Fuel Cycle”.
 - CINTAC Chair proposed a November 4 CINTAC meeting to review the proposed U.S.-Canada letter.

- 10:50 – 11:30: TeamUSA Subcommittee (Donald Hoffman, Chair (not at meeting))
 - Reviewed Subcommittee charter – aims to identify actions USG and U.S. industry can take to ensure successful global and domestic deployment of U.S. reactor technologies, products and services and the continued operation of the U.S. fleet.
 - Subcommittee plans to evaluate areas such as: preserving the U.S. fleet; addressing difficulties foreign companies have when seeking to purchase civil nuclear products/services from the United States; maximizing U.S. content in countries where a non-U.S. nuclear reactor technology has been selected; focused USG support for small businesses; regulatory capacity building; assisting DOC with its Clean Tech Export Competitiveness Strategy; and other areas.



- Subcommittee plans to propose a letter for full committee consideration soon.

11:30 – 12:00

TeamUSA Update

- U.S. Government representatives from the TeamUSA Civil Nuclear Working Group provided updates on current activities and answered questions from CINTAC members.
 - U.S. Department of Energy, Office of Nuclear Energy (DOE/NE) Update:
 - Noted August 31, 2021 meeting between DOE Secretary Granholm and Ukrainian President Zelensky in Washington DC where they signed a joint statement and announced establishment of a U.S.-Ukraine Strategic Energy and Climate Dialogue. Noted September 9, 2021 meeting between Secretary Granholm and the Indian Minister of Natural Resources where both sides noted their desire to cooperate on civil nuclear energy.
 - At the September IAEA General Conference, Secretary Granholm delivered the U.S. national statement and read a letter from President Biden. Her remarks noted the importance of civil nuclear to address climate change and the need to develop advanced technologies.
 - IAEA Director General Grossi wants to bolster the IAEA's role in climate change activities and will work to promote U.S.-hosted Nuclear Power Minister (October 26-28, 2022).
 - Secretary Granholm traveled to Warsaw, Poland September 22-23, 2021 for the U.S.-Poland Strategic Dialogue and the Partnership for Transatlantic Energy and Climate Cooperation (P-TECC). P-TECC included a business forum and a government-to-government Ministerial where Secretary Granholm highlighted civil nuclear as a climate solution in the region and held bilateral meetings with EU Member States.
 - U.S. Department of State, Bureau of International Security and Nonproliferation (ISN) Update:
 - Noted that the State Department's Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology (FIRST) program, which provides capacity-building support to partner countries, completed a webinar series with ASEAN countries and with sub-Saharan African countries (Kenya, Ghana, Namibia, and South Africa). Webinars featured USG and U.S. industry speakers.



- State Department preparing to extend bilateral FIRST engagements with Indonesia and Kenya and several other countries in Latin America, southeast Asia, and others.
- In July 2021, signed a Nuclear Cooperation Memorandum of Understanding (NCMOU) with Ghana.
- U.S. Nuclear Regulatory Commission (NRC) Update:
 - As part of the NRC's Memorandum of Cooperation (MOC) with the Canadian Nuclear Safety Commission (CNSC), in August, the NRC and CNRC completed their first collaborative activity under the MOC and released two joint reports (available on NRC website).
 - In early September the NRC held a workshop with the Romanian nuclear regulator and utility on aging management efforts and Cernavoda unit 1 refurbishments. In August, the NRC held several workshops in Poland focused on quality assurance and vendor inspection. Another Poland workshop is planned for early 2022.
 - NRC collaborating with State Department on its FIRST engagement and supported the ASEAN and Vietnam virtual webinars.
 - NRC Chairman attended the IAEA General Conference where he held twenty bilateral meetings, participated in multilateral discussions, and renewed six bilateral MOCs with foreign regulators.
- U.S. Trade and Development Agency (USTDA) Update:
 - Provided update on its civil nuclear related activities, including technical assistance in Romania on a SMR siting assessment, an ongoing front-end engineering and design (FEED) study in Poland, the October 6-7, 2021 SMR Standards and Regulations Workshop (focused on Romania and broader EU region). Four additional SMR Workshops planned. Reverse trade mission with Romania planned for 2022 (focused on civil nuclear broadly).
- DOC/ITA Advocacy Center (AC) Update: noted that AC services are available for eligible U.S. companies and encouraged interested companies to contact the AC.
- U.S. Development Finance Corporation (DFC): noted DFC lifting of its nuclear prohibition and that DFC working to determine to best support nuclear projects.

12:00 – 12:15 Break

12:15 – 1:00 Briefing: DOE Supply Chain Review



- DOE provided an overview of its draft 1-Year Report on Supply Chain Review and requested industry feedback on the Report.
- Executive Order (EO) 14017 on Supply Chains asked DOE to assess the energy sector industrial base supply chain to understand U.S. and global demand for clean energy technology and determine what share of global market the U.S. can support.
- Started with a report on high capacity battery storage and now looking at entire energy supply chain (solar, wind, energy storage, batteries, energy grid, nuclear, carbon capture technology, semiconductors, hydro, fuel cells, digital infrastructure, other areas).
- Reports aim to identify supply chain vulnerabilities and determine what USG can do to address vulnerabilities in collaboration with industry.
- Overview of DOE Nuclear Energy Supply Chain Report:
 - Aims to ensure continued operation of existing fleet, deployment of new technology, and support U.S. exports. DOE and U.S. industry have been collaborating for several years to address supply chain concerns. Report seeks to prioritize which gaps/vulnerabilities USG should focus on. DOE requested industry input on supply chain issues.
 - Discussion/Q&A:
 - Industry asked about report's methodology. DOE noted that it is gathering stakeholder input, reviewing previous interaction, and working to identify key policy levers (e.g. fuel fabrication capabilities for advanced reactors, HALEU for advanced reactors, legislative activities, etc.).
 - DOE aware that U.S. supply chain contracted to support current fleet and has capability to expand to serve larger market (domestic and international).
 - Industry asked if cost is being considered given that sometimes the U.S. supply chain is more expensive than foreign competitors. DOE recognizes this and determining if a "Buy America" requirement makes sense.
 - Industry asked how DOE is considering codes and standards development regarding component design and if DOE is interacting with the NRC. DOE noted that it is considering regulatory issues and is aware that supply chain needs to meet certain standards for components; also looking at regulatory issues as a tool to reinvigorate supply chain.
 - Industry asked if expanding U.S. testing capacity is needed. DOE noted that it is looking into what infrastructure/human capital is needed to support U.S. testing capability.



- Industry asked if DOE looking at what it takes to finance manufacturing and testing facilities and if it is considering DOE's Loan Program Office (LPO) for potential supply chain support. DOE noted that it is looking at new up-front capabilities that are needed and LPO is one tool that could be used to reinvigorate supply chain.
- Industry noted that there is significant interest in having strong USG support for U.S. universities and research reactors, as well as other countries wanting to utilize these assets. DOE noted its desire to continue its strong support for U.S. nuclear universities and a desire to integrate research reactors into user facilities. U.S. export of research reactors could reinvigorate part of U.S. supply chain.
- Industry asked how DOE is engaging U.S. utilities given their interest in maintaining U.S. civil nuclear supply chain. DOE noted its desire to talk with U.S. utilities.

1:00 – 1:30 Conclusion and Next Steps

- CINTAC voted to send COP26 letter to Secretary Raimondo.
- CINTAC agreed to convene November 4, 2021 meeting to discuss proposed Canada letter.
- CINTC Chair to suggest outside speakers that could talk to CINTAC and asked for CINTAC member input on potential speakers.

1:30 – 2:00 Public Comment & Adjourn

- Comments from Jeffrey Merrifield, Energy Section Leader and Partner, Pillsbury Winthrop Shaw Pittman LLP:
 - Applauded CINTAC's efforts on the Canada letter. Noted that Ontario spending \$25 billion to refurbish Bruce and Darlington units. USNIC did a member survey of advanced reactor developers and 65 percent noted that they intend to deploy in both the U.S. and Canada. Canada has no capability to produce HALEU. Sask Power and Alberta Power will likely follow Ontario Power Generation's (OPG) lead regarding SMR deployment.
 - Noted that "Buy America" and "Buy Ontario" provisions could be problematic – recommended collaboration between U.S. and Canada to deploy SMRs/advanced reactors. Noted importance of regulatory harmonization – want to avoid duplicative regulatory activities.
 - NRC Part 53 activities (developing risk-informed performance-based method for review) could establish framework for speedy NRC approval.



MEETING PARTICIPANTS

CINTAC Members

- Jeff Harper, CINTAC Chair and Vice President, Strategy and Business Development, X Energy, LLC
- Mimi Limbach, Nuclear Energy Communications Affiliate, 4 Factor Consulting, LLC
- Margaret Harding, Member of the Board, American Nuclear Society (ANS)
- Hash Hashemian, President, Analysis and Measurement Services Corporation (AMS)
- Paul Fakes, Senior Manager, Government Relations, ASME
- Ahmet Tokpinar, Vice President, Business Development and Operations, Bechtel Power Corporation
- Glenn Neises, Nuclear Director, Burns & McDonnell
- Joseph Miller, General Manager for Advanced Technologies, BWXT Advanced Technologies, LLC
- John Valentino, Director, International Clients, Centrus Energy Corp.
- Nicholas McMurray, Senior Program Director, Nuclear Energy, Clearpath
- Malcolm Critchley, President and CEO, ConverDyn
- Gary Wolski, Vice President, Market Development, Curtiss-Wright
- Russell Neely, Chief Operating Officer, Edlow International Company
- Vice Admiral (Retired, U.S. Navy) William Hilarides, Advisory Board Member, Elysium Industries, USA
- Colin Austin, Senior Vice President of International Business, EnergySolutions
- Dayton Lawman, Director of Sales, Navy and Nuclear Products, Flowserve Limitorque
- Jarret Adams, Founder and CEO, Full On Communications
- Brandon Brooks, Strategic Business Development Manager, General Atomics
- Rob Sweeney, President and CEO, ibeX Energy Solutions
- Seth Grae, President and CEO, Lightbridge Corporation
- Alex Polonsky, Partner, Morgan, Lewis, & Bockius LLP
- Paul Murphy, Founder and Managing Director, Murphy Energy & Infrastructure Consulting
- Michael McMahon, Vice President, Consulting and Strategic Projects, NAC International
- Carol Berrigan, Executive Director, Federal Programs & Supplier Relationships, Nuclear Energy Institute
- Chris Colbert, Chief Strategy Officer and Chief Financial Officer, NuScale Power, LLC
- Eric Rasmussen, Director of Engineering and Sales, RSCC Wire and Cable, LLC
- Nathan Schukei, Sales and Business Development Manager, Rosemount Nuclear Instruments, Inc.
- Gard Clark, Senior Vice President, Energy and Environment, Teledyne Brown Engineering, Inc.
- Marcia Burkey, Senior Vice President and Chief Financial Officer, TerraPower, LLC



- Yassin Hassan, Professor, Texas A&M University
- Mike Shaqqo, Senior Vice President, Advanced Reactor Programs, Westinghouse Electric Company

U.S. Government:

- Jonathan Chesebro, CINTAC Designated Federal Officer and Senior International Trade Specialist, U.S. Department of Commerce (DOC), International Trade Administration (ITA), Office of Energy and Environmental Industries (OEEI)
- Kate Von Reichstein, Senior International Trade Specialist, DOC/ITA/OEEI
- Derek Schlickeisen, Regional Manager, DOC/ITA Advocacy Center
- Bethany Kastrinsky, Foreign Affairs Officer, U.S. Department of State, Office of Nuclear Energy, Safety, and Security, Bureau of International Security and Nonproliferation
- Laura Denlinger, Senior Counterproliferation Advisor, Deputy Team Chief, U.S. Department of State, Office of Cooperative Threat Reduction (ISN/CTR)
- Jac Goodman, Senior Advisor, U.S. Department of Energy, Office of Nuclear Energy (DOE/NE)
- Michelle Scott, Senior Advisor for Commercial Affairs, DOE/NE
- Mike Goff, Senior Advisor, DOE/NE
- Tisi Igogo, Lead Coordinator, DOE 1-Year Reports on Supply Chain Review, Office of Policy
- Carla Frisch, Acting Executive Director and Principal Deputy Director of Office of Policy, DOE
- Brett Rini, Senior International Relations Officer, U.S. Nuclear Regulatory Commission (NRC), International Cooperation and Assistance, Office of International Programs
- Lauren Mayros, International Policy Analyst, NRC Office of International Programs
- Sara Mareno, Director, Structured Finance and Insurance, U.S. International Development Finance Corporation (DFC)
- Mary Sloan, Country Manager, Europe & Eurasia, U.S. Trade and Development Agency (USTDA)
- Carl Kress, Regional Director, Middle East, North Africa, Europe, Eurasia and East Asia, USTDA

Members of the public:

- Jackie Toth, Senior Advocacy Director, Good Energy Collective
- Craig Updyke, Director, Global Policy & International Trade, ASTM International
- Andrea Jenetta, Senior Editor, Nuclear Power and Pricing, S&P Global Platts
- Floyd DesChamps, President, The Desner Group
- Carl Perez, Co-Founder and CEO, Elysium Industries
- Jeffrey Merrifield, Energy Section Leader and Partner, Pillsbury Winthrop Shaw Pittman