



## **POLICY ISSUE** **(Notation Vote)**

May 6, 2019

SECY-19-0046

FOR: The Commissioners

FROM: Margaret M. Doane  
Executive Director for Operations

SUBJECT: OPTIONS FOR A LONG-TERM ALTERNATIVE TO THE NUCLEAR  
ENERGY INSTITUTE COMPOSITE ADVERSARY FORCE

PURPOSE:

The purpose of this paper is to provide the Commission with an assessment and options for a long-term alternative to the Nuclear Energy Institute (NEI)-managed Composite Adversary Force (CAF) in response to "Staff Requirements – COMSECY-18-0004 – Approval to Implement an Alternative to the Nuclear Energy Institute Composite Adversary Force for Designated Facilities," dated April 2, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18092A387; not publicly available). Specifically, this paper provides the Commission with options for a long-term Mock Adversary Force (MAF) for use during U.S. Nuclear Regulatory Commission (NRC)-conducted force-on-force (FOF) inspections.

Consistent with the staff's commitment in COMSECY-18-0004, "Approval to Implement an Alternative to the Nuclear Energy Institute Composite Adversary Force for Designated Facilities," dated March 14, 2018 (ADAMS Accession No. ML18067A329; not publicly available), the staff collected and evaluated lessons learned from using the Joint Composite Adversary Force (JCAF) developed by NextEra Energy, LLC (NextEra) and Entergy Operations, Inc. (Entergy). The results of the staff's assessment of the JCAF are also included with this paper.

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Enclosures 2 and 3 transmitted herewith contains Official Use Only – Sensitive Internal Information. When separated from the enclosure, this paper is decontrolled.

**SUMMARY:**

On March 14, 2018, the staff submitted COMSECY-18-0004, detailing the staff's recommendation to utilize the NextEra and Entergy-developed JCAF as an alternative to the NEI-managed CAF to support NRC-conducted FOF exercises at NextEra and Entergy sites in 2018 and 2019. The staff explained that using the JCAF for this period would allow the NRC to complete NRC-conducted triennial FOF inspections within the schedule required by Section 170D of the Atomic Energy Act of 1954, as amended (AEA), while other long-term options were identified and assessed. In the resulting Staff Requirements Memorandum (SRM), SRM-COMSECY-18-0004, the Commission approved the staff's recommendation and directed the staff to provide a notation vote paper within 1 year of the SRM with an assessment and options for a long-term alternative to the NEI-managed CAF.

This paper includes the staff's assessment of the following options to support NRC-conducted FOF exercises: (1) one or more industry-managed MAFs; (2) a single MAF provided by the NRC through a contract with an independent vendor; and (3) a single MAF provided by the NRC through an agreement to utilize the West Virginia National Guard (WVNG). The staff evaluated each option against eight criteria described in this paper to assess whether each option can ensure that: (1) FOF inspections required by Section 170D of the AEA continue to inform the security evaluations that assess a licensee's program to defend against the design-basis threat (DBT); (2) potential conflict of interest concerns can be mitigated, as necessary and appropriate, as required by Section 170D(b)(3) of the AEA; and (3) resource implications are understood. For the reasons described below, and in Enclosure 3 to this paper, the staff recommends Option 1.

To inform the options in this paper, the staff also completed an assessment of the JCAF. Although areas for improvement were identified, the staff concluded that the methods utilized by NextEra and Entergy to develop the JCAF provided for a MAF that is consistent with the DBT adversary characteristics. The staff also concluded that the JCAF either met or exceeded established NRC performance standards during FOF inspections. Additionally, the staff concluded that concerns associated with the appearance of, or potential for, a conflict of interest were mitigated as a result of the JCAF team's structure and appropriate regulatory oversight implemented by the staff. The staff's complete evaluation and assessment of the JCAF can be found in Enclosure 2 to this paper.

**BACKGROUND:**

Since 2004, the staff used the NEI-managed CAF to serve as the mock adversary in FOF exercises. This practice was established in accordance with Commission direction in two SRMs: SRM-SECY-03-0208, "Adversary for Force-on-Force Exercises at NRC Licensed Facilities," dated December 23, 2003 (ADAMS Accession No. ML033570528; not publicly available); and SRM-SECY-08-0007, "Composite Adversary Force Options," dated August 1, 2008 (ADAMS Accession No. ML082140864; not publicly available). The decision to utilize the industry-provided CAF was reaffirmed in SRM-SECY-08-0007. SRM-SECY-08-0007 also directed the staff to continue to assess the performance of the CAF. If the CAF capabilities or performance were to decline below NRC requirements or expectations, the staff was directed to advise the Commission and provide a recommendation for an alternative option to staff the CAF. To date, there has been no indication of an actual conflict of interest regarding the NEI-managed CAF.

Effective February 1, 2018, Entergy and NextEra ended their membership with NEI. As non-member licensees, Entergy and NextEra have not reached an agreement with NEI that would provide for continued access to the NEI-managed CAF for FOF inspections at Entergy and NextEra facilities. Consequently, NextEra and Entergy proposed formation and use of the JCAF, which would consist of personnel from both fleets to serve as mock adversaries (ADAMS Accession Nos. ML18072A092 and ML18072A094; not publicly available). NRC has completed seven FOFs using the JCAF. The JCAF has met NRC expectations for providing a credible and reliable adversary team. During this time, there has been no indication of an actual conflict of interest with the JCAF.

Since inception of the CAF, and subsequently the JCAF, the NRC has performed oversight of MAFs to ensure their effectiveness in replicating adversary characteristics. This has been achieved through direct oversight of the MAF during selection, training, and qualification; rehearsal exercises; NRC-conducted FOF planning week; and NRC-conducted training, rehearsal, and exercise week. The NRC exercises its oversight by verifying that the MAF meets NRC performance standards in NSIR/STD-2004/15-001, Rev. 1, "Composite Adversary Force Performance Standards for Force-on-Force Exercises" (ADAMS Accession No. ML18164A031; not publicly available).<sup>1</sup>

Some additional, more detailed background can be found in Enclosure 1 to this paper.

#### DISCUSSION:

To address the requirements of SRM-COMSECY-18-0004, the staff considered several potential options for implementing a MAF to serve as a long-term alternative to the NEI-managed CAF. During the staff's development of options, the staff engaged other government entities and conducted market research with vendors. Additionally, to help inform the options, the staff conducted a public meeting on August 22, 2018.<sup>2</sup> During this meeting, the staff solicited stakeholder feedback on two specific issues: (1) potential options for developing a MAF that stakeholders thought the staff should consider; and (2) criteria the staff should consider for evaluating the potential MAF options. Following the public meeting, on September 27, 2018, NEI submitted a letter detailing its recommended option.<sup>3</sup> The staff did not receive any other input from stakeholders during or following the public meeting.

The staff considered options for developing a MAF that would be provided by the industry: (1) Multiple MAFs – continuation of the current approach (use of the NextEra and Entergy-developed JCAF and the NEI-managed CAF); (2) Multiple MAFs – allow for licensees to develop their own MAF; (3) Single MAF – provided by the industry via an independent oversight/advisory board (i.e., replace the NEI function); (4) Single MAF – provided by the industry via NEI for members or through a fee-based service agreement. In a letter dated September 27, 2018, NEI recommended "the development of performance-based standards and guidelines for a MAF team to allow licensees the flexibility to use a fleet MAF, a MAF

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<sup>1</sup> The existing performance standards in NSIR/STD-2004/15-001, Rev. 1, include, in part: "... the general knowledge, skills, and abilities related to team tactics, communications, planning, collusion, weapons training and proficiency, physical security systems, and specialized equipment." The standards were developed in 2004 and tailored to the NEI-managed CAF. The staff also used NSIR/STD-2004/15-001, Rev. 1, to assess whether the JCAF met NRC performance standards.

<sup>2</sup> Category 2 Public Meeting, "Potential Long-Term Options for the Mock Adversary Force used for NRC-conducted FOF Inspections," August 22, 2018 (ADAMS Accession Nos. ML18249A114 and ML18249A119).

<sup>3</sup> "NEI Recommendation for an Option Concerning the Establishment of a Mock Adversary Force to Support Force-on-Force Exercises" (ADAMS Accession No. ML19024A031; not publicly available).

provided through an alliance with other sites or fleets, or a MAF provided by a vendor." Therefore, after considering NEI's submittal, the staff decided to merge its options for an industry-provided MAF into a single option for Commission consideration.

The staff considered an option for developing a single MAF that would be provided by the NRC via contract through an independent vendor. The staff conducted market research to explore the viability of this potential option, engaging three companies to elicit information on vendor capabilities. Two of the companies currently provide security services and/or consulting to the commercial nuclear industry, while the third company did not have any affiliation with the industry. The focus of the market research was to address two primary questions: (1) did the company have the capability to develop and implement a MAF and how would it be structured; and (2) for companies currently providing services to the commercial nuclear industry, how would those companies mitigate conflict of interest.

The staff also considered options that involved developing a partnership with government entities: (1) Department of Energy (DOE)-provided MAF via contract personnel from active DOE sites and/or contractors; (2) Defense Threat Reduction Agency (DTRA)-provided MAF via contractors; (3) Department of Defense (DOD)-provided MAF via active duty military component; and (4) National Guard Bureau-provided MAF via the WVNG Critical Infrastructure Protection (CIP) Battalion. Only the WVNG expressed interest in supporting NRC mission requirements; therefore, the staff focused its effort on exploring the use of the WVNG as an option for Commission consideration.

#### Mock Adversary Force Options

Based on the considerations above, the staff analyzed three distinct options for long-term MAF implementation:

Option 1 – One or more industry-managed MAFs: This option would allow the industry to implement and manage the MAFs for use during NRC-conducted FOF exercises. This option would provide flexibility to the industry and could be implemented in a number of ways. For example, licensees could continue to use the JCAF and the NEI-managed CAF (current approach), create their own new MAFs, or return to a single industry-managed MAF. Additionally, licensees would have the flexibility to use a fleet MAF, a MAF provided through an alliance with other sites and/or fleets, or a MAF provided by a vendor (subject to an evaluation by the NRC to determine whether and how conflict of interest concerns could be sufficiently mitigated). Under Option 1, the NRC would provide oversight to ensure that MAF teams meet the NRC performance standards and to ensure separation and independence between the MAF team and the site's guard force during exercises. The approval of any new MAF would include NRC review and approval of the proposal, NRC review of the implementation plan (to include oversight of the MAF selection and training, etc.), and final NRC approval prior to the MAF being utilized in an NRC-conducted FOF exercise. (Note, the approval process for the NextEra and Entergy-managed JCAF was completed in a timeframe of approximately 4 months from receipt of proposal.) Under this option the staff would also inform the Commission prior to implementation of a new MAF.

Option 2 – Single NRC-provided MAF: The NRC would contract with an independent vendor after soliciting potential private sector companies through a request for proposal to create a single MAF. Under Option 2, the NRC would provide oversight to ensure that MAF teams meet the NRC performance standards.

Option 3 – Single NRC-provided MAF: The NRC would execute an agreement to utilize the WVNG CIP Battalion to create a single MAF. This unit falls under the oversight of the National Guard Bureau J34 Homeland Security Mission Assurance Division. Under Option 3, the NRC would provide oversight to ensure that MAF teams meet the NRC performance standards.

The staff used eight criteria to evaluate the three MAF options in order to ensure that: (1) FOF inspections required by Section 170D of the AEA continue to inform the security evaluations that assess a licensee's program to defend against the DBT; (2) potential conflict of interest concerns can be mitigated, as necessary and appropriate, as required by Section 170D(b)(3) of the AEA; and (3) resource implications are understood. The eight criteria are as follows:

1. Credibility of the MAF
  - Will the option provide for a suitable selection and training process?
  - Will the option provide consistency and reliability regarding tactical application?
  - How will the team composition be structured?
2. Sustainability
  - How effectively can each option be maintained?
  - What are the potential long-term consequences?
3. Impact on Licensee Activities
  - What direct or indirect impacts may result from implementation?
4. Knowledge Transfer
  - How will personnel who have acquired sensitive information be dispositioned upon separation from a MAF?
5. Conflict of Interest
  - Can conflict of interest be appropriately mitigated?
6. Projected Costs
  - What will the cost be to the industry and the NRC?
7. Implementation Schedule
  - What is the estimated timeline for implementation?
8. Oversight
  - What will the organizational structure be for the MAF regarding responsibility for administrative and operational oversight?

The following summarizes the staff's evaluation of the options. The staff concludes that considering these criteria, all three options would produce a MAF that is capable of supporting NRC-conducted FOF exercises. On balance, the staff recommends Option 1. In making this recommendation, the staff did not weigh all criteria equally. For example, the value of Knowledge Management supports the agency's overall mission objectives, so it was weighed more heavily. Alternatively, Projected Costs is an area that has so many potential variables that it was given a lower weight. The staff also acknowledged the significant value of maintaining the proven, well-established MAF infrastructure that Option 1 represents.

#### Credibility of the MAF

The staff considered three elements in its assessment of MAF credibility: (1) selection and training of personnel; (2) consistency and reliability regarding tactical application; and (3) team composition. The staff concluded that each of the three options is capable of producing a

credible MAF with an appropriate selection and training process, consistent tactical capabilities, and suitable team composition and organizational structure.

For Option 1, the NRC previously verified that the NEI-managed CAF and the Entergy and NextEra-managed JCAF meet the NRC performance standards in NSIR/STD-2004/15-001, Rev. 1, and determined that each provides a credible MAF. If licensees propose additional MAFs, the staff would need to evaluate each proposal on a case-by-case basis. The staff would assess the selection and training process to ensure a consistent and reliable team can be developed capable of replicating the adversary characteristics as defined by the DBT, and review the team composition and organization of the proposed MAF to ensure that conflict of interest concerns can be effectively mitigated. Once a new MAF was implemented, the NRC would continue to provide oversight to ensure that NRC performance standards are being met.

For Option 2, the staff determined through market research that independent vendors exist that are capable of assembling a credible MAF with the necessary skills and training to meet NRC performance standards. Specifically, the independent vendors consulted indicated that they would most likely select security personnel from nuclear sites and/or recently separated veterans to minimize training time, and that they would use a similar selection and training process to that currently used in the industry.

For Option 3, the staff determined that the WVNG has experience with conducting exercise activities and working in industrial environments and is capable of providing a credible MAF. The WVNG also includes personnel with a level of training consistent with the DBT adversary characteristics. Specifically, these personnel have received basic military training (including weapons familiarization and small unit tactics) and are required to maintain these basic military skills through mandated training. Additionally, the WVNG would draw on Special Forces personnel to serve as MAF team directors to leverage their mission planning expertise.

#### Sustainability

In evaluating this criterion, the staff considered how effectively each option could be maintained and potential long-term consequences.

The staff concluded that, although each option carries a degree of risk with regard to sustainability, all three options could be maintained effectively over time. Under each option, the staff would continue to provide oversight of the MAFs to ensure NRC performance standards are being met with regard to replicating the adversary characteristics as prescribed in the DBT and to ensure that conflicts of interest are mitigated, as applicable.

The staff further concluded that Options 2 and 3 present less risk than Option 1 because Option 1 would be dependent on licensee decisions; NRC's role would be to provide oversight to ensure acceptable performance and mitigate conflict of interest. Under Options 2 and 3, the MAF would be governed by a contract with an independent vendor or an agreement to utilize the WVNG, which could provide greater stability and predictability. Under Option 1, because there is no regulatory requirement for licensees to maintain their own MAF, a licensee (or group of licensees) could decide to opt out of providing its own MAF or being part of a joint MAF at any time. A licensee could decide to discontinue its membership with NEI, and potentially lose access to the use of the NEI-managed CAF. In such cases, a licensee could potentially partner with a separate MAF that already exists (e.g., the JCAF), develop its own MAF, or elect to do neither. If a licensee elects to do neither, the NRC would then be required to develop and

implement a MAF to support NRC-conducted FOF exercises to meet its statutory obligations under Section 170D of the AEA.

Further, the NRC does not currently have a contingency plan in place should the agency be required to develop and implement a MAF. If such a circumstance arose, the NRC could consider use of Option 2 or 3; however, there would be substantial resource impacts to stand up a new MAF while overseeing existing licensee-managed MAFs. Also, the need to implement a contingency plan would likely delay completion of NRC-conducted FOF exercises. In the event that an NRC-conducted FOF exercise is rescheduled, the NRC may be at risk of not meeting the AEA Section 170D requirement to conduct security evaluations not less often than once every 3 years. However, based on interactions with industry, the staff does not anticipate a need to implement an NRC-managed MAF; the staff has received no indication that licensees would not implement their own MAF in the event of a departure from NEI.

#### Impact on Licensee Activities

In assessing the impact of MAF options on licensee activities, the staff focused on background check requirements, training for site access, equipment and job-specific training, fitness for duty (FFD) requirements, and staffing personnel. The staff concluded Options 2 and 3 would have the least impact on licensee activities because under these options, members of the MAF would fall under NRC programs for meeting requirements associated with background checks, training for site access, and FFD. Staffing and other training would be provided by the vendor or the WVNG. The cost under these two options would be passed to the industry, either through direct billing for inspection activities or as part of the annual licensing fees.

Under Option 1, the impact to licensees would vary depending on how the licensee elects to implement a MAF. The NRC would need to evaluate, on a case-by-case basis, any licensee proposal in order to understand the structure and team composition and what, if any, additional impact that may have on licensee activities. The licensee would ultimately be responsible for the development and maintenance of its own MAF, which may include background checks, training for site access, equipment and job-specific training, FFD, and staffing personnel. For example, a licensee continuing to use the NEI-managed CAF would continue to meet requirements associated with background checks and training when backfilling security officer positions if they assigned personnel to the NEI-managed CAF. The licensee would need to manage how the personnel are reintegrated upon completion of their assignment to the NEI-managed CAF, which may involve additional activities associated with staffing personnel. The impacts associated with these activities may be lower compared to licensees that choose to develop their own MAF. Specifically, licensees that choose to develop their own MAF could have to backfill as many as 24 security officer positions to replace the security personnel assigned to the MAF and may incur additional costs for hiring personnel outside their current organization with appropriate knowledge, skills, and abilities to fill positions such as MAF director roles, as was the case with the JCAF.

Under Option 2, personnel selected to serve on the MAF under this option would fall under NRC programs related to background checks, site access, and FFD. Staffing and other training would be provided by the vendor. The impact on licensee activities would be minimal.

Under Option 3, members of the WVNG selected to serve on a MAF under this option would fall under NRC or WVNG programs related to background checks, site access, and FFD. Staffing and other training would be provided by the WVNG. The impact on licensee activities would be minimal.

### Knowledge Transfer

In assessing knowledge transfer, the staff considered how personnel who have acquired sensitive information would be dispositioned upon separation from a MAF, and the benefits (e.g., the ability of the licensees to utilize the information gained from MAF members in strengthening their own programs) or concerns (e.g., malicious use of the information gained from MAF members) that this may entail.

Security personnel at a power reactor site are trained to defend the facility by understanding how to implement the protective strategy. This includes varying degrees of knowledge about target set equipment for the facility where they are employed. When personnel are selected to be on a MAF, they would be exposed to additional detail about adversary tactics within the DBT. This includes techniques for employing deception to gain access, exploiting physical security vulnerabilities, eliminating target sets, and using small unit tactics and explosives. They would also learn techniques for circumventing protective strategies for numerous facilities during their 18–24 month rotation. The staff evaluated how the various options would present opportunities to leverage the knowledge gained by personnel having served on the MAF, or mitigate concerns associated with the spread of malicious use of this knowledge.

The staff concluded that Option 1 would provide the most benefit with respect to knowledge transfer. Under Option 1, security personnel would generally either remain on the MAF or rotate back to their respective security organization where their MAF experience could be leveraged to enhance internal physical protection and protective strategy programs. Because security personnel would likely remain within the industry, concerns about knowledge transfer would be mitigated. Options 2 and 3 could be implemented in a way that mitigates concerns about knowledge transfer, but these options may not allow for the knowledge and skills of MAF personnel to be leveraged for the benefit of NRC licensees.

For example, under Option 2, the staff determined that based on market research, there are various strategies potential companies could employ to mitigate the concern associated with knowledge transfer. One strategy involves recruiting and rotating personnel from within the vendor's own company and allowing them to support other critical sectors. Another strategy involved potentially recruiting personnel from the commercial nuclear industry and creating an arrangement where they would be rehired by the industry upon completion of their rotation, which has the potential to benefit the industry. Another strategy considered hiring former members of the military and then upon completion of their rotation, the MAF assisting them with their transition into other relevant sectors where their insights could be leveraged.

Under Option 3, the knowledge, skills, and abilities gained by members of the WVNG assigned to the MAF would not be leveraged by NRC licensees, but would likely enhance the mission capabilities of the WVNG CIP Battalion once they completed their rotation and returned to the unit to support other Federal programs related to critical infrastructure and the defense industrial base.

### Conflict of Interest

The NRC has a statutory obligation under Section 170D of the AEA to mitigate any potential conflict of interest that could influence the results of an FOF inspection, as the Commission determines to be necessary and appropriate. The staff concluded Option 3 represents the least risk associated with conflict of interest.



Option 1 represents the most risk associated with conflict of interest. Under Option 1, if the current approach is maintained, the measures utilized to address the conflict of interest concerns for the NEI-managed CAF and the JCAF would remain in effect. If other licensees opted to develop their own MAF, the NRC would need to evaluate the composition and structure of each new proposed MAF to determine whether and how conflict of interest could be mitigated. For example, a MAF proposal consisting of a single fleet or a small number of sites may pose conflict of interest concerns that are more difficult to mitigate. The staff's evaluation would include a review of measures the licensee has put in place to mitigate conflict of interest (e.g., licensee security personnel could not act as an adversary for their own site). The staff would also determine whether additional measures would be needed. Consistent with its current practice for the NEI-managed CAF and the JCAF, these measures could include, for example, enhanced NRC oversight during MAF training, and during the preparation and execution of NRC-conducted FOF exercises. Similar to the approach taken with the JCAF, the staff would evaluate each new proposed MAF – including the measures to mitigate conflict of interest – and inform the Commission prior to the implementation of new MAFs.

The JCAF development and implementation illustrates the complexity of a case-by-case review. With the development and implementation of the NextEra and Entergy JCAF, the staff committed to increased oversight to verify clear separation of functions between the JCAF and the site's security force since the JCAF model lacked certain features of the NEI-managed CAF regarding mitigation of the conflict of interest. For example, unlike the NEI-managed CAF that draws its adversaries from power reactor sites across the industry (including from sites where security services are not provided by G4S), the initial proposal for the JCAF would have fielded teams exclusively from Entergy sites for Entergy adversaries, and NextEra sites for NextEra adversaries. Because a successful performance by the adversary team would directly result in negative consequences for the adversaries' employer, a potential conflict existed. Further, the proposal did not provide for management of the JCAF that is divorced from management of the site security forces, nor did the proposal discuss how the reciprocal oversight of JCAF teams by JCAF directors from the other fleet would provide mitigation of the potential conflict of interest. Accordingly, the staff assessed that the potential for a conflict of interest could be greater than currently exists for the NEI-managed CAF. Additionally, the increased oversight provided by the staff placed a resource burden on the NRC. Specifically, the NRC had to reprioritize activities because personnel from various branches and regional offices were tasked with supporting JCAF oversight.

Option 2 would require a separate evaluation of what measures may be necessary to mitigate conflict of interest based on which vendor was awarded the contract, and what, if any, association the independent vendor may have had, currently has, or may be developing with the commercial nuclear industry.

Under Option 3, the WVNG would have no organizational affiliation with the commercial nuclear industry and, therefore, the staff does not anticipate any potential for, or appearance of, a conflict of interest.

#### Projected Costs

The staff considered the cost to industry and the NRC of establishing and maintaining a MAF (or MAFs) for each potential option. The estimated costs include staffing and managing the MAF(s). All of the cost estimates reflect the cost to industry (collectively and individually) which may be billed directly or indirectly (i.e., Part 170 or Part 171, respectively), depending on which

option the Commission selects<sup>4</sup>. Cost estimates for each option are provided in Enclosure 3 to this paper.

The staff was only able to obtain limited financial information about the contract costs associated with industry-provided MAFs due to limitations of what industry was willing to share, due to competition and proprietary concerns. Based on the information available to the staff, Option 3 appears to be the least costly solution. Due to staff's limited information about industry contract costs, the cost factor carried a lower weight in staff's recommendation to the Commission for which option to select.

Each industry-developed MAF would also have associated costs for NRC oversight. The staff expects that the initial costs for each oversight activity would be comparable to the cost associated with increased oversight for the JCAF (i.e., costs associated with the first year of oversight to establish a new MAF). The NRC billed an additional \$455,296 to NextEra and Entergy for initial oversight of the JCAF for calendar year 2018. Staff expects that ongoing oversight activity for the JCAF will be lower in future years, now that the JCAF has been established. In addition, the staff is currently revising the MAF oversight process to provide more effective management. This will further reduce cost and better align with the activities identified in the inspection procedure associated with conducting one NRC-conducted FOF exercise, which could start with Cycle 6 in 2020. These revisions to the MAF oversight process would be applicable to all options.

The staff concluded that resources required for NRC oversight of additional MAFs would increase the cost to the industry. The actual cost would depend on how many licensees opted to develop their own MAF. The NRC-incurred cost associated with any MAF would be passed to the industry either through direct billing for inspection activities or as part of the annual licensing fees. For example, MAF oversight associated with Option 1 would be direct billed to either NEI or specific licensees through Part 170 fees. Costs associated with Options 2 and 3 would be indirectly billed through Part 171 (annual) fees to licensees to recover the NRC costs associated with both: (1) establishing a contract MAF or MAF supplied by the WVNG and (2) NRC oversight of MAF performance. The detailed costs associated with each option have not been shared with the industry.

### Implementation Schedule

In order to coincide with the beginning of the next cycle for NRC-conducted triennial FOF inspections, the staff would need to implement the approved option from this paper by January 1, 2020. As described below, Option 1 could likely be implemented by this date, while Options 2 and 3 would likely take longer.

For Options 2 or 3, the staff would continue with the current approach as it works to implement the option.

The staff concluded Option 1 would represent the most efficient option regarding implementation. Specifically, under Option 1, the industry could maintain the current approach uninterrupted, or licensees could develop their own MAFs in the future, if so desired. Licensees with current internal adversary programs that resemble a MAF could more easily develop their own MAF pending NRC review of the organizational structure for conflict of interest and

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<sup>4</sup> Option 1 represents a direct cost to industry and would not be billed by the NRC. Option 2 or Option 3 would be budgeted items executed by the NRC and would be billed to the industry as appropriate.

implementation of NRC performance standards. The staff estimates this could take as little as 2-to-3 months. Licensees opting to develop their own MAF, absent a dedicated internal adversary program, would require more effort, and the staff estimates this could take 5-to-6 months to implement. Licensees opting to enter into agreements with other licensees to utilize a MAF that has previously been approved by the NRC would be subject to NRC review of the organizational structure for conflict of interest. The staff estimates that this could be implemented in as little as 1 month. The staff would inform the Commission prior to implementation of each new MAF.

Under Option 2, the implementation schedule for entering into a contract with a third-party vendor is expected to take 12-to-14 months, if expedited, and could potentially take longer. Once the contract is in place, the staff estimates it would take an additional 2-to-3 months to select and train the MAF.

Under Option 3, the implementation schedule for establishing an agreement to utilize the WVNG is expected to take 8-to-10 months. Once the agreement is in place, the staff estimates it would take an additional 2-to-3 months to select and train the MAF.

### Oversight

The staff determined that oversight could be effectively implemented for Options 1, 2, and 3 so long as operational MAF oversight is maintained by the NRC, as would be the case in all options.

In SRM-SECY-08-0007, the Commission directed the staff to maintain the current approach in which the NRC would maintain operational oversight and NEI would maintain administrative oversight of the CAF. The operational oversight function pertains to the use of the MAF as an instrument in the conduct of inspection activity. The administrative oversight function pertains to the human resource and logistics associated with the MAF (e.g., pay and benefits, scheduling, training, site access, etc.). By splitting the administrative and operational oversight roles between the NRC and the industry, the industry does not have any operational influence over the MAF during NRC-conducted exercises and inspection activities. Specifically, this helps prevent the adversary team from being influenced by any industry representatives during the planning and execution of exercises during NRC-conducted triennial FOF inspections.

Under Option 1, the industry would retain administrative oversight while the NRC would retain operational oversight. Under Options 2 and 3, administrative and operational oversight would be maintained by the NRC.

### RECOMMENDATION:

The staff recommends Option 1 – One or more industry-managed MAFs. This option provides licensees with the most flexibility while still being capable of meeting the requirements of Section 170D of the AEA. The industry could continue to use the JCAF and the NEI-managed CAF or, alternatively, allow licensees to add MAFs or return to a single industry-managed MAF. Licensees would also have the flexibility to use a fleet MAF, a MAF provided through an alliance with other sites and/or fleets, or a MAF provided by a vendor. The staff has determined the industry is capable of developing and providing a credible adversary force that can replicate the characteristics outlined in the DBT. Additionally, this option would be funded by the industry and eliminate direct cost to the NRC that would exist under Options 2 and 3. The staff would

also continue to evaluate the performance of the MAFs and assess the organizational structure and size of the teams.

The staff has also determined that although Option 1 has the greatest risk with regard to conflict of interest concerns, conflict of interest could be appropriately mitigated for most scenarios under this option, as they have been demonstrably mitigated since inception of the CAF, and subsequently, the JCAF. The staff would only approve use of a MAF if conflict of interest concerns were appropriately mitigated. Additionally, Option 1 carries the most risk with regards to sustainability since the NRC does not currently have a contingency plan in place should the agency be required to develop and implement a MAF. However, based on interactions with industry, the staff does not anticipate a need to implement an NRC-managed MAF; the staff has received no indication that licensees would not implement their own MAF in the event of a departure from NEI.

During the development of this paper and the evaluation of the options under the identified criteria, there were some staff that supported recommending Option 3 – Single MAF: provided by NRC through an agreement to utilize the WVNG CIP Battalion. Staff favoring this position felt that: (1) the risk associated with Option 1 regarding the absence of a regulatory requirement to maintain a MAF could compromise the ability of the NRC to meet its statutory obligations under Section 170D of the AEA; (2) Option 3 would fully mitigate conflict of interest concerns; and (3) the current estimated cost for this option, which would be funded by the NRC with the cost being passed to the industry, would represent a reduction in the financial burden placed on the industry as compared with the current approach and Options 1 and 2.

It is the staff's view that Commission approval of an alternative MAF under any of the options would not constitute backfitting. Backfitting is defined, in part, in 10 CFR 50.109 as "the modification of or addition to . . . the procedures or organization required to . . . operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position." Were the NRC to approve an alternative to the NEI-managed CAF and the JCAF, this would not meet the definition of backfitting in 10 CFR 50.109 as applied to the licensees being evaluated in the FOF inspections, because 1) there would be no change in the requirements associated with licensee participation in NRC-conducted FOF exercises, and therefore no change to the procedures or organization required to operate the facility, and 2) the change would not result from a new or amended staff position interpreting NRC regulations. Similarly, with respect to the organizations that provide the current MAFs, approval of an alternative MAF would not constitute backfitting because NextEra and Entergy's voluntary provision of the JCAF is not an activity that is required for operation of a facility (licensees have no obligation to provide a MAF), and approving an alternative to the MAFs would not impose new requirements on these entities by regulation, order, or a staff position interpreting a regulation. The same logic applies to NEI, although the Backfit Rule would not apply to NEI as a non-licensee.

#### RESOURCES:

Potential resources for each option are provided in the discussion section and Enclosure 3. Because there would potentially be a large number of different licensee MAFs that could be implemented under Option 1 if licensees choose to develop new MAFs, the NRC resources needed to conduct oversight of the MAFs could increase. This increased oversight could require the NRC to reprioritize other regular activities to provide oversight of multiple MAFs, which was necessary during JCAF oversight.

If the Commission directs the staff to implement Option 1, there are sufficient resources in the FY 2020 budget to support this request. Funding for FY 2021 and beyond will be addressed through the planning budget priority management process. If the Commission directs the staff to implement either Options 2 or 3, staff will work within established agency budget process to identify resources in support of the selected option. No resources have been budgeted in FY2020 to support Option 2 or Option 3.

COORDINATION:

The Office of the General Counsel has reviewed this document and has no legal objection.



Margaret M. Doane  
Executive Director  
for Operations

Enclosures:

1. Background of NRC MAF
2. NRC Staff Assessment of the JCAF developed by NextEra Energy, LLC and Entergy Operations, Inc. (OUO-SII)
3. Cost Estimates for MAF Options (OUO-SII)

**SUBJECT: OPTIONS FOR A LONG-TERM ALTERNATIVE TO THE NUCLEAR ENERGY  
INSTITUTE COMPOSITE ADVERSARY FORCE**

Date: May 6, 2019

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DATE	1 /28 /19	1 /28/19	1/ 28/19	2/12/19	2/12/19	2/21/19
OFC	NSIR/DSO	NSIR	NSIR	OCFO	EDO	
NAME	S. Atack	Via Email J. Lubinski	Via Email B. Holian	Via Email M. Wylie	M. Doane	
DATE	2/28/19	3/7/19	3/15/19	4/8/19	5/6/19	

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