



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 10, 2023

Mr. Shawn Gibby
Vice President
Nuclear Engineering
Duke Energy
526 South Church Street, EC-07H
Charlotte, NC 28202

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2; CATAWBA NUCLEAR STATION, UNITS 1 AND 2, SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1, MCQUIRE NUCLEAR STATION, UNITS 1 AND 2, OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3, H. B. ROBINSON, STEAM ELECTRIC PLANT, UNIT 2, AND WILLIAM STATES LEE III NUCLEAR STATION, UNITS 1 AND 2; ISSUANCE OF AMENDMENTS REGARDING THE RELOCATION OF THE EMERGENCY OPERATIONS FACILITY (EPID L-2021-LLA-0230)

Dear Mr. Gibby:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 311 and 339 to Renewed Facility Operating License Nos. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant, Units 1 and 2, respectively; Amendment Nos. 316 and 312 to Renewed Facility Operating License Nos. NPF-35 and NPF-52 for the Catawba Nuclear Station, Units 1 and 2, respectively; Amendment No. 196 to Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1; Amendment Nos. 327 and 306 to Renewed Facility Operating License Nos. NPF-9 and NPF-17 for the McGuire Nuclear Station, Units 1 and 2, respectively; Amendment Nos. 427, 429, and 428 to Renewed Facility Operating License DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3, respectively; Amendment No. 275 to Renewed Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit 2; Amendment Nos. 001 and 001 to Combined License Nos. NPF-101 and NPF-102 for the William States Lee III Nuclear Station, Unit 1 and 2, respectively.

The amendments are in response to your application dated December 14, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21348A003), as supplemented by letters dated May 13 and September 15, 2022 (ML22133A218 and ML22258A295, respectively). The amendments approve the relocation of the existing Duke Energy Emergency Operations Facility (EOF), located at 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Natreon J. Jordan, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-325, 50-324, 50-413,
50-414, 50-400, 50-369
50-370, 50-269, 50-270,
50,287, 50-261, 52-018,
and 52-019

Enclosures:

1. Amendment No. 311 to DPR-71
2. Amendment No. 339 to DPR-62
3. Amendment No. 316 to NPF-35
4. Amendment No. 312 to NPF-52
5. Amendment No. 196 to NPF-63
6. Amendment No. 327 to NPF-9
7. Amendment No. 306 to NPF-17
8. Amendment No. 427 to DPR-38
9. Amendment No. 429 to DPR-47
10. Amendment No. 428 to DPR-55
11. Amendment No. 275 to DPR-23
12. Amendment No. 001 to NPF-101
13. Amendment No. 001 to NPF-102
14. Safety Evaluation

cc: w/encls:

Mr. John A. Krakuszeski
Site Vice President
Duke Energy Progress, LLC
Brunswick Steam Electric Plant
8470 River Rd., SE (M/C BNP001)
Southport, NC 28461

Nicole Flippin
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745

Mr. Thomas Haaf
Site Vice President
Duke Energy Progress, LLC
Shearon Harris Nuclear Power Plant
5413 Shearon Harris Rd, M/C HNP01
New Hill, NC 27562-9300

Mr. Edward Pigott
Site Vice President
Duke Energy Carolinas, LLC
McGuire Nuclear Station
12700 Hagers Ferry Road
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Mr. Steven M. Snyder
Site Vice President
Duke Energy Carolinas, LLC
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672-0752

Laura Basta
Site Vice President
H. B. Robinson Steam Electric Plant
Duke Energy Progress, LLC
3581 West Entrance Road, RNPA11
Hartsville, SC 29550

Additional Distribution via Listserv

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2; CATAWBA NUCLEAR STATION, UNITS 1 AND 2, SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1, MCQUIRE NUCLEAR STATION, UNITS 1 AND 2, OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3, H.B. ROBINSON, STEAM ELECTRIC PLANT, UNIT 2, AND WILLIAM STATES LEE III NUCLEAR STATION, UNITS 1 AND 2; ISSUANCE OF AMENDMENTS REGARDING THE RELOCATION OF THE EMERGENCY OPERATIONS FACILITY (EPID L-2021-LLA-0230) DATED: MARCH 10, 2023

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RidsNrrPMMcGuire Resource	RidsNrrPMRobinson Resource
RidsNrrPM[William States Lee] Resource	JArce, NSIR

ADAMS Accession No.: ML22332A493

OFFICE	NRR/DORL/LPL2-2/PM	NRR/DORL/LPL2-2/LA	NSIR/DSO/RLB/BC(A)	OGC
NAME	NJordan	RButler	FSacko	MCarpentier
DATE	11/25/2022	12/2/2022	10/17/2022	1/09/2023
OFFICE	NRO/DNRL/LPL2-1/BC	NRR/DORL/LPL2-2/BC	NRR/DORL/D	NRR/D
NAME	MMarkley	JDWrona (JDanna for)	BPham (GSuber for)	AVeil (MKing for)
DATE	2/03/2023	1/13/2023	02/22/2023	03/09/2023
OFFICE	NRR/DORL/LPL2-2/PM			
NAME	NJordan			
DATE	03/10/2023			

OFFICIAL RECORD COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 311
Renewed License No. DPR-71

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 339
Renewed License No. DPR-62

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC
NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION
DOCKET NO. 50-413
CATAWBA NUCLEAR STATION, UNIT 1
AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 316
Renewed License No. NPF-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

NORTH CAROLINA MUNICIPAL POWER AGENCY No. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 312
Renewed License No. NPF-52

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 197
Renewed License No. NPF-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 327
Renewed License No. NPF-9

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-370

MCGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 306
Renewed License No. NPF-17

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 427
Renewed License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 429
Renewed License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 428
Renewed License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Carolinas, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
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WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-261

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE NO. DPR-23

Amendment No. 275
Renewed License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 52-018

WILLIAM STATES LEE III NUCLEAR STATION, UNIT 1

AMENDMENT TO COMBINED LICENSE NO. NPF-101

Amendment No. 001
License No. NPF-101

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
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3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
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on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 52-019

WILLIAM STATES LEE III NUCLEAR STATION, UNIT 2

AMENDMENT TO COMBINED LICENSE NO. NPF-102

Amendment No. 001
License No. NPF-102

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Energy Progress, LLC (the licensee), dated December 14, 2021, as supplemented on May 13 and September 15, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended to authorize the relocation of the existing Duke Energy Emergency Operations Facility from 526 South Church Street, Charlotte, North Carolina, to a Duke Energy office building located at 9700 David Taylor Drive, Charlotte, North Carolina.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



King, Michael signing on behalf
of Veil, Andrea
on 03/10/23

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2023



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-325 AND 50-324

CATAWBA NUCLEAR STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-413 AND 50-414

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

DOCKET NO. 50-261

MCGUIRE NUCLEAR STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-369 AND 50-370

OCONEE NUCLEAR STATION, UNIT NOS. 1, 2, AND 3

DOCKET NOS. 50-269, 50-270, AND 50-287

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-400

WILLIAM STATES LEE III NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 52-018 AND 52-019

1.0 INTRODUCTION

By letter dated December 14, 2021 (Reference 1), as supplemented by letters dated May 13 and September 15, 2022, (Reference 2 and Reference 3, respectively) Duke Energy Carolinas, LLC and Duke Energy Progress, LLC (collectively referred to as Duke Energy) requested U.S. Nuclear Regulatory Commission (NRC, or the Commission) approval to relocate the existing Commission-approved Duke Energy Emergency Operations Facility (EOF), located at 526 South Church Street, Charlotte, North Carolina, to a new location at the Duke Energy office building at 9700 David Taylor Drive, Charlotte, North Carolina.

The current EOF serves the operating fleet of 11 reactors: Brunswick Steam Electric Plant, Unit Nos. 1 and 2 (BNP); Catawba Nuclear Station, Unit Nos. 1 and 2 (CNS); Shearon Harris Nuclear Power Plant, Unit 1 (HNP); McGuire Nuclear Station, Unit Nos. 1 and 2 (MNS);

Oconee Nuclear Station, Unit Nos. 1, 2, and 3 (ONS); and H. B. Robinson Steam Electric Plant, Unit No. 2 (RNP); as well as the combined license facility William States Lee III Nuclear Station, Units 1 and 2 (WSL). The current EOF is located greater than 25 miles from the BNP, HNP, ONS, RNP, and WSL and, therefore, requires prior Commission approval per paragraph IV.E.8.b of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to Part 50, "Domestic Licensing of Production and Utilization Facilities," of Title 10 of the *Code of Federal Regulations* (10 CFR).

Duke Energy is proposing to relocate its consolidated EOF approximately 9 miles from the current location. Duke Energy does not propose to alter the facility functions, capabilities, or staffing as currently described in the Duke Energy Common Emergency Plan and annexes. The proposed change to the EOF's location results in the EOF being greater than 25 miles from 5 of the 6 Duke Energy nuclear sites.

The supplemental letters dated May 13 and September 15, 2022, provide additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on February 22, 2022 (87 FR 9647).

2.0 REGULATORY REQUIREMENTS AND GUIDANCE

The NRC staff considered the following relevant regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," in its evaluation of Duke Energy's request to relocate its existing consolidated EOF.

- Paragraph 50.47(b)(1) of 10 CFR Part 50 states, in part, that "Primary responsibilities for emergency response by the nuclear facility licensee...have been assigned,. . . and each principal response organization has staff to respond and to augment its initial response on a continuing basis."
- Paragraph 50.47(b)(3) of 10 CFR Part 50 states, in part, that "...arrangements to accommodate State and local staff at the licensee's Emergency Operations Facility have been made. . . ."
- Paragraph 50.47(b)(8) of 10 CFR Part 50 states, that "Adequate emergency facilities and equipment to support the emergency response are provided and maintained."
- Paragraph 50.47(b)(9) of 10 CFR Part 50 states, that "Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use."
- Section E, "Emergency Facilities and Equipment," of Appendix E to 10 CFR Part 50 states, in part, that "Adequate provisions shall be made and described for emergency facilities and equipment, including: . . . 8.a.(i) . . . and an emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency;"
- Paragraph IV.E.8.b. of Appendix E to 10 CFR Part 50 states: "For a nuclear power reactor licensee's emergency operations facility required by paragraph 8.a of this section, either a facility located between 10 miles and 25 miles of the nuclear power reactor site(s), or a primary facility located less than 10 miles from the nuclear power reactor site(s) and a backup facility located between 10 miles and 25 miles of the nuclear power reactor site(s). An emergency

operations facility may serve more than one nuclear power reactor site. A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site. Provisions for locating NRC and offsite responders closer to a nuclear power reactor site that is more than 25 miles from the emergency operations facility must include the following:

1. Space for members of an NRC site team and Federal, State, and local responders;
2. Additional space for conducting briefings with emergency response personnel;
3. Communication with other licensee and offsite emergency response facilities;
4. Access to plant data and radiological information; and
5. Access to copying equipment and office supplies.”

Paragraph IV.E.8.c to Appendix E of 10 CFR Part 50 requires that the facility have the following capabilities:

1. The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves;
2. The capability to analyze plant technical information and provide technical briefings on event conditions and prognosis to licensee and offsite response organizations for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves, and
3. The capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the emergency operations facility serves more than one site.

Revision 2 to NUREG-0654/FEMA-REP-1, Final Report, December 2019, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants” (Reference 4), provides the following guidance that establishes evaluation criteria related to the EOF under 10 CFR 50.47(b)(3) and (b)(8):

- Section II.C, “Emergency Response Support and Resources,” Evaluation Criterion C.1, states that “Emergency response support and resources to the licensee’s EOF, as agreed upon, are described.”
- Section II.H, “Emergency Facilities and Equipment,” Evaluation Criterion H.3, states that “An EOF is established, using current Federal guidance, as the primary base of emergency operations for the licensee during a radiological incident. The EOF facilitates the management and coordination of the overall emergency response, including the sharing of information with Federal, state, local, and tribal government authorities.”

The NRC's issuance of the guidance document, NUREG-0696, "Functional Criteria for Emergency Response Facilities," (Reference 5) in 1981, established criteria for the NRC staff to use in evaluating whether an applicant or licensee has met the requirements in paragraph IV.E.8 to Appendix E of 10 CFR Part 50. Section 4, "Emergency Operations Facility," of NUREG-0696 provides criteria for the EOF in the following categories:

- Functions (Section 4.1);
- Location, Structure, and Habitability (Section 4.2);
- Staffing and Training (Section 4.3);
- Size (Section 4.4);
- Radiological Monitoring (Section 4.5);
- Communications (Section 4.6);
- Instrumentation, Data System Equipment, and Power Supplies (Section 4.7);
- Technical Data and Data System (Section 4.8); and
- Records Availability and Management (Section 4.9).

Section VI.1 of the Office of Nuclear Security and Incident Response (NSIR)/Division of Preparedness and Response (DPR) Interim Staff Guidance (ISG) document, NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants," Revision 0, November 2011 (Reference 6) provides guidance for a performance-based approach for evaluating changes to a consolidated EOF.

NRC staff also considered guidelines set forth in Table 1, "Emergency Operations Facility," in Supplement No. 1 to NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," reprinted February 1989, in evaluating location options for the EOF and Backup EOF.

3.0 TECHNICAL EVALUATION

3.1 Background

The NRC has incrementally approved the use of the Duke Charlotte EOF for Catawba, McGuire, Oconee, and Lee. In a letter dated April 14, 1983 (Reference 7), the licensee informed the NRC that the EOFs for the Catawba and McGuire sites would be co-located at the Duke Charlotte EOF in Charlotte, North Carolina. By letter dated August 18, 1983 (Reference 8), the NRC found that the habitability and location of the CNS and MNS proposed common Duke Charlotte EOF would comply with the guidelines of Table 1, "Emergency Operations Facility," in Supplement No. 1 to NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," (Reference 9), and was, therefore, acceptable.¹ By letter dated January 10, 2006 (Reference 10), the NRC staff approved the consolidation of the Oconee EOF into the Duke Charlotte EOF based on the Commission's approval documented in the staff requirements memorandum (SRM) to SECY-05-0172, "Duke Power Company's Request to Incorporate the Oconee Emergency Operations Facility into the EOF Shared by Catawba and McGuire Nuclear Stations," dated November 2, 2005 (Reference 11). With the issuance of Commission Memorandum and Order CLI-16-19, dated December 15, 2016 (Reference 12), and the issuance of the combined license, dated December 19, 2016 (Reference 13), the Duke Charlotte EOF was approved to also serve as the EOF for WSL. In the SRM for SECY-17-0050, "Duke Energy Proposal to Further Consolidate Duke Corporate Emergency Operations Facility," (Reference 14) the Commission previously approved the Duke Energy's proposal to consolidate the BNP, HNP, and RNP EOFs into the existing Duke Charlotte EOF.

In its application dated December 14, 2021, Duke Energy states that it recognizes that prior to commencing operation at WSL, an additional license amendment would need to be approved by the NRC regarding changes to the WSL Emergency Plan to allow inclusion of WSL into the Common EOF.

In SECY-22-0090, "Duke Energy Request to Relocate the Emergency Operations Facility" (Reference 15), the NRC staff recommended approval of Duke Energy's request to relocate the consolidated EOF to the new location. In SRM for SECY-22-0090 the Commission approved Duke Energy's proposal to relocate the EOF (Reference 16).

3.2 NRC Staff Evaluation

The purpose of an EOF is to provide a facility from which the licensee can manage the overall licensee emergency response during an event, including coordinating radiological and environmental assessments, determining protective actions, and communicating and coordinating with Federal, State, and local agencies. This facility complements other licensee emergency response facilities (ERF), such as the Technical Support Center (TSC), which is located onsite at each respective site. The TSC is a facility from which the licensee staff provides plant management and technical support to plant operations personnel during emergency conditions, relieves the reactor operators of peripheral duties and communications not directly related to reactor system manipulations, prevents congestion in the control room, and performs EOF functions until the EOF is staffed and ready to respond. EOF functions can be fulfilled by each respective site's TSC under emergency response conditions, as needed.

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of the

¹ At the time of the 1983 request, Commission-level review and approval was not required.

proposed changes to the Duke Energy Common Emergency Plan and site-specific annexes, as described in the application dated December 14, 2021, and supplemented by letters dated May 13 and September 15, 2022. The NRC staff's technical evaluation for the relocation of the proposed consolidated EOF for the BNP, CNS, HNP, MNS, ONS, and RNP sites is detailed below.

3.2.1 Functions

The proposed consolidated EOF will provide a facility for Duke Energy's management of offsite emergency response, coordination of radiological assessment, and management of initial recovery operations, including notification of events, and protective action recommendations as assigned in the Duke Energy Common Emergency Plan. The technical support centers (TSCs) for all sites will continue to have the responsibility for event classification. Licensee emergency response organization staff in the proposed consolidated EOF will continue to perform the following functions that are currently performed in the existing facility:

- Coordinate field team activities to monitor radiological activity;
- Perform dose assessments, and develop and provide protective action recommendations (PARs) to offsite agencies based upon plant conditions or dose projections;
- Make emergency event notifications to designated State and local agencies for each of the Duke Energy sites, which include initial notifications, changes in emergency classification or PARs, and periodic updates; and
- Provide event, plant, and response information to public information staff for dissemination to the media and public through the respective sites' joint information centers.

In its letter dated December 14, 2021, Duke Energy states that the current EOF has functioned as a consolidated EOF for CNS, MNS, and ONS since 2006, and for BNP, HNP, and RNP commencing in 2017. The EOF staff has successfully demonstrated the ability to manage an emergency response for each of the sites in several evaluated exercises and numerous drills. Duke Energy has well established procedures and practices in place for emergency management that will continue to be used with the proposed consolidated EOF. While revisions to some EOF-related procedures are anticipated (e.g., for address and telephone number changes), the relocation will not alter the overall approach to Duke Energy emergency response.

Based on its review of the licensee's submittal, as supplemented, the NRC staff has determined that there are no proposed changes to EOF functions and responsibilities. Because there are no proposed changes to EOF functions and responsibilities, management of the overall licensee emergency response would remain consistent with that currently described in section B, "Emergency Response Organization," and section H, "Emergency Facilities and Equipment," of the Duke Energy Common Emergency Plan.

Based on its review of the licensee's submittal, the NRC staff has determined that the proposed consolidated EOF provides equivalent capabilities as compared to the existing facility, including equipment that monitors plant and environmental conditions to provide information required for dose assessment and development of PARs. The proposed consolidated EOF will also provide working space for representatives from offsite response organizations, including State and Federal agencies. This will allow coordination of information, and deployment of emergency

resources from State and Federal agencies. There is a dedicated conference room for NRC personnel and dedicated space for State representatives in the main EOF area, the dose assessment area, and the offsite field monitoring area. Similar to the current EOF, local agencies are not expected to respond to the proposed consolidated EOF. Because the proposed EOF will provide comparable capabilities and functions during drills, exercises, and actual emergencies that are equivalent to the current EOF, the NRC staff has determined that the proposed consolidated EOF location will not adversely impact the EOF's ability to perform its functions.

Section 4.1 of NUREG-0696 suggests that the licensee should use normal industrial security for the EOF. Access to the Duke Energy office building on David Taylor Drive and parking lot is controlled by electronic card readers. Duke Energy states that access to the proposed consolidated EOF, within the building, is also controlled by electronic card readers that only allow entry for authorized personnel. Duke Energy states that during times when security personnel are not present at the Duke Energy office building on David Taylor Drive, State, Federal Emergency Management Agency (FEMA), and NRC responders may use a call-box installed outside of the main entrance. This will notify a nearby facility containing Duke Energy Security personnel, who will then allow access to the building for authorized individuals remotely. Additionally, emergency response organization (ERO) personnel will be available in the EOF to support access of State, FEMA, and NRC responders. The NRC staff reviewed the licensee's submittal and determined that there are no proposed changes to EOF security capabilities, as compared to the current EOF facility.

Section IV.I of NSIR/DPR-ISG-01, which supplements the guidance in Section 4.1 of NUREG-0696, states, in part, that the EOF will have facilities and capabilities for "Effectively responding to and coordinating response efforts for events occurring simultaneously at more than one site for a co-located or consolidated EOF." In Section 3.1.11 to Enclosure 1 of its December 14, 2021, letter, Duke Energy states, in part:

The new EOF will maintain the current EOF ability to support events occurring simultaneously at up to two sites. The Duke Energy Common Emergency Plan includes a requirement to perform a multi-site event scenario within each eight-year exercise cycle. The new EOF will participate in the multi-site event and the participating sites will be varied. The new EOF will be equipped with facilities to monitor and analyze events at more than one site. A sufficient number of workstations will be available for data retrieval and the facility will have adequate display capability to simultaneously present this information to the EOF staff. In addition, the capability will be provided to support communications to offsite agencies for more than one event. If the new EOF must respond to an event at more than one site simultaneously, the normal EOF staff complement is augmented with additional personnel as needed.

Based on the above, the NRC staff did not identify any licensee changes to the Duke Energy Common Emergency Plan that would negatively impact the ability of the EOF to respond effectively to and coordinate response efforts for events occurring simultaneously at more than one Duke Energy site.

Although not required by regulation, the licensee conducted a two-site-simultaneous demonstration drill on September 12, 2022, to demonstrate the ability of the proposed consolidated EOF to perform the functions designated in the Duke Energy Common Emergency

Plan. Duke Energy provided notice and the opportunity for offsite response organizations to participate, and for NRC and FEMA personnel to observe the drill at the new facility. Emergency management personnel from the States of North Carolina and South Carolina observed and participated in the drill. Duke Energy successfully performed this dual-site drill with the ONS and RNP sites. Based on review and observation of this drill, NRC determined that Duke Energy demonstrated the ability of the proposed Duke Energy consolidated EOF to effectively function during simultaneous events at the nuclear power reactor sites.

Based on the above, the NRC staff finds that the proposed consolidated EOF does not negatively alter the functions of the EOF as currently described in the Duke Energy Common Emergency Plan. The NRC staff used Section 4.1 of NUREG-0696, as supplemented by NSIR/DPR-ISG-01, to evaluate the functions of the proposed consolidated EOF and found it acceptable. Based on the above, the NRC staff concludes that the proposed consolidated EOF meets the standards of 10 CFR 50.47(b) and requirements of paragraph IV.E.8 of Appendix E to 10 CFR Part 50, and the staff concludes that the proposed EOF provides the same capabilities as the current EOF.

3.2.2 Location, Structure and Habitability

3.2.2.1 Location

Section 4.2, of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on considerations of EOFs at a single location. Specifically, footnote 1 to Table 2, "Relation of EOF Location to Habitability Criteria," in Section IV.I of NSIR/DPR-ISG-01 states, in part, "Specific Commission approval is required for EOF locations beyond 25 miles of the TSC." The proposed consolidated EOF is located at 9700 David Taylor Drive, Charlotte, North Carolina, within a Duke Energy-owned building. The proposed change would relocate the EOF approximately 9 miles away from the current consolidated EOF.

The table below shows a comparison of approximate distances from the operating Duke Energy nuclear sites to the current EOF and proposed consolidated EOF.

Site	Distance to EOF	
	Current EOF (miles)	New EOF (miles)
Brunswick	184	183
Catawba	18	26
Shearon Harris	110	104
McGuire	15	12
Oconee	120	126
H.B. Robinson	69	73

The current consolidated EOF was approved by the NRC as an EOF that was greater than 25 miles from the BNP, HNP, ONS, and RNP nuclear power reactor sites and has served as the EOF for those reactor sites. The current EOF was also used as the EOF (within 25 miles) for CNS and MNS. The NRC's approval of the current EOF was based, in part, the EOF's capability to fulfill its required emergency response functions for all sites that the facility served; the facility's location and size; the anticipated staffing and training of licensee emergency response personnel at the facility; the facility's communications capabilities and data systems; the facility's capacity for accommodating a multi-site event; and its ability to accommodate personnel from the NRC and/or State and local response organizations. The NRC staff also considered prior Commission statements regarding previous consolidation approvals, and the licensee's provision of a near-site location for NRC and other responders at all affected sites for which the EOF was more than 25 miles from the facility site. NRC staff confirmed that there were no changes to the previously approved near-site locations for BNP, HNP, ONS, and RNP for the Federal, state, and local responders.

The NRC staff finds that relocation of the Duke Energy common EOF to its proposed location will continue to fulfill the necessary emergency response functions and will effectively support Duke Energy's emergency response at all of the sites that the facility serves. This determination is based, in part, on the proposed EOF's capability to fulfill its required emergency response functions for all sites that the facility serves, the facility's location and size, the anticipated staffing and training of licensee emergency response personnel at the facility, the facility's communications capabilities and data systems, the facility's capacity for accommodating a multi-site event, and the facility's ability to accommodate personnel from the NRC and/or State and local response organizations. The NRC staff also considered prior Commission statements regarding other consolidated EOF approvals, and Duke Energy's provision of an acceptable near-site location for NRC and other responders at all of its reactor sites that are more than 25 miles from the proposed EOF.

EOF Location change from within 25 miles of CNS to greater than 25 miles from CNS

The NRC staff finds that relocation of the Duke Energy Common EOF from 18 miles from CNS to 26 miles from CNS will effectively support Duke Energy's emergency response at CNS. Duke Energy stated that the proposed EOF will not result in a change in ERO response time and will continue to use the current pool of EOF staff who already respond to the Common EOF that uses the same communication methods and equipment as the proposed Duke Energy Common EOF. Additionally, there are no proposed changes to the Duke Energy Common Emergency Plan descriptions for emergency response instrumentation or data system equipment. The staff's determination of acceptability for relocating the Duke Energy Common EOF to a facility that is 26 miles from the CNS site is also based on the proposed EOF's capability to fulfill its required emergency response functions for CNS; the facility's location and size; the anticipated staffing and training of licensee emergency response personnel at the facility; the facility's communications capabilities and data systems; the facility's capacity for accommodating a multi-site event; and the facility's ability to accommodate personnel from the NRC and/or State and local response organizations. Based on all of these considerations, the NRC staff finds the EOF location change to greater than 25 miles from CNS acceptable.

Based on the above, the NRC staff finds that the physical location of the proposed consolidated EOF meets the requirements of paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

The NRC staff also evaluated the following considerations in determining the adequacy of the location for the proposed Duke Energy Consolidated EOF:

1) Offsite Agreement

The regulations in 10 CFR 50.47(b)(3) require that arrangements to accommodate State and local staff are available at the licensee's EOF. Duke Energy states that the new consolidated EOF can accommodate designated Duke Energy personnel and offsite county, State and Federal responders, including NRC and FEMA. It is anticipated that representatives from North Carolina, and South Carolina, may be dispatched to the EOF for an event at specific Duke Energy site(s). Local agencies are not expected to respond to the new EOF, as is the case for the current EOF. In its letter dated November 14, 2021, Duke Energy stated that there are no tribal organizations within any of the Duke Energy nuclear sites' 10-mile Emergency Planning Zone (EPZ).

The proposed consolidated EOF will provide working space for each of the responding representatives from North Carolina and South Carolina. Section 4.2 to NUREG-0696, as supplemented by section IV.1 of NSIR/DPR-ISG-01, states that "It is strongly recommended that the EOF location be coordinated with State and local authorities to improve the relationship between the licensee and offsite organizations." In Enclosure 5, "Offsite Response Organization Concurrence," to its letter dated December 14, 2021, Duke Energy provided signed letters of concurrence from the following State agencies, which currently respond to the existing Duke Energy consolidated EOF, indicating that they concur with the proposed facility relocation:

- North Carolina Emergency Management, and
- South Carolina Emergency Management Division.

The NRC staff finds that no changes are proposed to what is currently described in the Duke Energy Common Emergency Plan concerning support of designated State representatives responding to the proposed consolidated EOF.

In addition, per the "Memorandum of Understanding Between the Department of Homeland Security/FEMA and Nuclear Regulatory Commission Regarding Radiological Response, Planning and Preparedness," dated December 7, 2015, (Reference 17), the NRC requested that FEMA evaluate the impact of the proposed relocation of the Duke Energy consolidated EOF on offsite radiological emergency plans and preparedness, and provide its findings to the NRC. By letter dated April 12, 2022 (Reference 18), FEMA stated:

Based upon offsite response organization concurrence received from the states of North Carolina and South Carolina, and review of the memorandum of understanding between FEMA and the NRC, FEMA concurs that the proposed Duke Energy EOF relocation does not have an unintended negative impact on offsite radiological emergency preparedness plans.

Based on the above, the NRC staff has determined that the new consolidated EOF meets the requirements of 10 CFR 50.47(b)(3).

2) Impact on NRC's Incident Response

During the September 12, 2022, walkthrough of the new facility, NRC staff observed that the size and layout of the facility provided space for the co-location of NRC Site Team personnel with their licensee counterparts and access to dedicated NRC telephone lines. In addition, a dedicated conference room will be provided for NRC Site Team use, if deployed.

CNS Near-site NRC and Offsite Responder Location

Paragraph IV.E.8.b of Appendix E to 10 CFR Part 50 requires that for an EOF located more than 25 miles from a nuclear reactor site, provisions be made for locating NRC, and offsite responders closer to the reactor site to facilitate face-to-face interaction with emergency personnel entering and leaving the site. Section IV of NSIR/DPR-ISG-01 states, in part, that the EOF will have facilities and capabilities for "Locating NRC and offsite agency staff closer to a site if the EOF is greater than 25 miles from the site," and establishes guidance on minimum provisions at this location.

Duke Energy's near-site response locations are described in the Duke Energy Common Emergency Plan annexes for each affected reactor site. Duke Energy states that BNP, HNP, ONS, and RNP have designated near-site facilities for NRC and offsite responders since the current EOF is located greater than 25 miles from those sites. Those near-site facilities will remain the same upon approval of the new common EOF location and need not be evaluated further. CNS and MNS had not previously designated a near-site facility because the current consolidated EOF is between 10 and 25 miles from those sites; relocation of the central EOF to the proposed new location will require CNS to have a near-site facility for NRC and other offsite agency responders, since the proposed consolidated EOF is located 26 miles from the CNS site.

The current CNS site annex to the Duke Energy Common Emergency Plan does not designate a location near CNS for NRC and offsite responders to meet NUREG-0654, Revision 2, Element H.3.a. Since the proposed consolidated EOF will be located greater than 25 miles from CNS, the updated CNS Annex, included in the application, specifies that the Duke Energy Corporate Headquarters, located in Uptown Charlotte, North Carolina, will be designated as the near-site location for NRC and offsite responders. The Duke Energy Corporate Headquarters is located approximately 18 miles from CNS. At this location, Duke Energy will provide a functional working space for NRC and State representatives. Duke Energy will also continue to provide telecommunications and habitability provisions, including telephones, ERO telephone contact lists, standard office lighting, heating, ventilation, air conditioning, copiers, office supplies, computers with internet access, conference area with whiteboards, separate areas suitable for briefing and debriefing response personnel, and radiation monitoring capability. The NRC staff finds this to be acceptable.

Based on the above, the NRC staff finds that the CNS near-site facility, as identified in CNS Site Annex to the Duke Energy Common Emergency Plan, meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8.b of Appendix E to 10 CFR Part 50.

CNS Alternate Emergency Response Facility

Paragraph IV.E.8.d of Appendix E to 10 CFR Part 50, requires licensees to provide ". . . an alternative facility (or facilities) that would be accessible even if the site is under threat of or experiencing hostile action, to function as a staging area for augmentation of emergency response staff. . . ." In addition, guidance in NUREG-0654, Revision 2, Element H.4. states: "An alternative facility (or facilities) is established, using currently provided and/or endorsed guidance, which would be accessible even if the NPP [nuclear power plant] site is under threat of or experiencing hostile action." Hostile action events warrant the timely activation of the ERO, supporting a rapid response to mitigate site damage as soon as the site is secured. To accomplish this, licensees must identify an alternative facility (or multiple facilities) to support

response functions when ERFs are not accessible because of a hostile action. In addition, during a hostile action event, ERO members would likely not have access to the site, but these events still warrant timely ERO augmentation.

The current CNS Site Annex to the Duke Energy Common Emergency Plan designates the current EOF as the CNS alternate emergency facility to meet NUREG-0654 Revision 2, Element H.4. Element H.4 requires an alternate facility be established, using currently endorsed guidance, that could be accessed by site ERO personnel responding to a hostile action-based event. As shown in the table above, the proposed consolidated EOF is farther from CNS than the current EOF but is within 30 miles of CNS as allowed by NSIR/DPR-ISG-01 section IV.D. Since the proposed consolidated EOF distance from CNS is within 30 miles, it will be designated by the licensee as the new CNS alternate emergency facility, as specified in Section 2.2.3 of the application (Reference 1). The NRC staff finds this to be acceptable.

Based on the above, the NRC staff finds that the CNS alternate emergency facility, as identified in proposed CNS Site Annex to the Duke Energy Common Emergency Plan, meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8.d of Appendix E to 10 CFR Part 50.

MNS Alternate Emergency Response Facility

As stated above, Paragraph IV.E.8.d of Appendix E to 10 CFR Part 50, requires licensees to provide “. . .an alternative facility (or facilities) that would be accessible even if the site is under threat of or experiencing hostile action, to function as a staging area for augmentation of emergency response staff. . . .” In addition, guidance in NUREG-0654, Revision 2, Element H.4. states: “An alternative facility (or facilities) is established, using currently provided and/or endorsed guidance, which would be accessible even if the NPP site is under threat of or experiencing hostile action.” Hostile action events warrant the timely activation of the ERO, supporting a rapid response to mitigate site damage as soon as the site is secured. To accomplish this, licensees must identify an alternative facility (or multiple facilities) to support response functions when ERFs are not accessible because of a hostile action. In addition, during a hostile action event, ERO members would likely not have access to the site, but these events still warrant timely ERO augmentation.

The current MNS Site Annex to the Duke Energy Common Emergency Plan designates the current EOF as the MNS alternate emergency facility to meet NUREG-0654 Revision 2, Element H.4. Element H.4 requires an alternate facility be established, using currently endorsed guidance, that could be accessed by site ERO personnel responding to a hostile action-based event. As shown in the table above, the proposed consolidated EOF is closer to MNS than the current EOF and will be designated by the licensee as the new MNS alternate emergency facility, as specified in Section 2.2.4 of the application (Reference 1). The NRC staff finds this to be acceptable.

Based on the above, the NRC staff finds that the MNS alternate emergency facility, as identified in proposed MNS Site Annex to the Duke Energy Common Emergency Plan, meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8.d of Appendix E to 10 CFR Part 50.

3.2.2.2 Structure

Section 4.2 of NUREG-0696, as supplemented by Table 2 to Section IV.1 of NSIR/DPR-ISG-01, provides guidance that, for an EOF located at or beyond 10 miles from a nuclear power reactor site, the structure be “Well engineered for design life of plant,” and provides the

“Uniformed Building Code” as an example building code. In addition, the structure must be able to withstand adverse conditions of high winds (other than tornadoes) and floods. The guidance further provides that winds and floods with a 100-yr recurrence frequency are acceptable for a design basis. It should be noted that the Uniform Building Code was replaced by the International Building Code in 2000.

The current EOF was approved by letter dated August 21, 2017 (Reference 25). Duke Energy stated in its application dated April 29, 2016 (Reference 19),

Phase 2 of the Energy Center is capable of withstanding wind loads and live loads equal to or greater than those specified in the current 2012 North Carolina State Building Code (which is based on the 2009 International Building Code).

Section 1609.3, “Basic wind speed” of the 2009 International Building Code states,

In non[-]hurricane-prone regions, when the basic wind speed is estimated from regional climatic data, the basic wind speed shall be not less than the wind speed associated with an annual probability of 0.02 (50-year mean recurrence interval). . . .

In its 2016 approval of the current Duke Energy Common EOF design, the NRC staff determined that the EOF (including its 50-year event wind design) met the structure criteria in Section 4 of NUREG-0696 and Section VI.I of NSIR/DPR-ISG-01.

Duke Energy states that the proposed consolidated EOF meets the intent of the guidance in NUREG-0696 that the building be “well-engineered for the design life of the plant,” and that it is capable of withstanding wind loads and live loads equal to, or greater than, those contained in the 1978 North Carolina Building Code (most recent building code at time of construction). Specifically, in its supplement dated May 13, 2022, Duke Energy states that

The David Taylor building was constructed to the 1978 North Carolina State Building Code. The 1978 North Carolina State Building Code provides wind load requirements in Section 1205, *Wind Loads*, and describes criteria for determining wind loads based on a recurrence frequency of 50 years. The David Taylor EOF is located in Mecklenburg County and is designed to withstand wind velocities of at least 80 miles per hour at the 50-year recurrence frequency.

There are several building codes in use throughout the United States. The North Carolina Building Codes are promulgated by the North Carolina Building Code Council and are interpreted and enforced by the Engineering Section. The North Carolina Building Code was the standard building code with North Carolina amendments, accepted statewide for general construction, in 1978. The proposed consolidated EOF was built to this code. The current 2018 North Carolina Building Code section 1609.3, “Ultimate Design Wind Speed,” provides criteria of wind speeds correspond to approximately a 7 percent probability of exceedance in 50 years.

Although the guidance in NUREG-0696 describes criteria for determining wind loads based on a recurrence frequency of 100 years, both the North Carolina Building Code and International Building Code use a recurrence frequency of 50 years, which are events with a higher probability of occurring than a 100-year event. The NRC staff had found this to be acceptable for Duke Energy’s current consolidated EOF. The NRC staff has considered precedent in that

staff approved the use of a 50-year wind design for other facilities, such as the Southern Nuclear Operating Company (SNC) common EOF, as set forth in a letter dated July 26, 2018 (Reference 20), approving the relocation of the SNC Common EOF. In this regard, SNC had stated in its application dated August 30, 2017 (Reference 21).

The new EOF is built to withstand wind loads and live loads of the 2009 International Building Code as adopted by the State of Alabama.

The NRC staff finds the Duke Energy proposed Common EOF structure's design for wind loads acceptable, because 1) it is consistent with the design of the current NRC-approved EOF; 2) it meets the 1978 North Carolina State Building Code, as well as the current 2018 North Carolina Building Code, and 3) the design is consistent with other EOF structures' wind load design that the NRC has approved in the past. Therefore, the NRC staff finds the building structure's wind load design to be acceptable.

Duke Energy also states that the David Taylor Drive location EOF is not located within a FEMA flood hazard area, as it is outside the 0.2 percent annual chance (500-year recurrence) for flood hazards. Consequently, in accordance with the 1978 North Carolina Building Code, the proposed consolidated EOF is neither designed nor required to meet the flood plain construction standards described in Chapter 34 of the Code. The NRC staff finds this to be acceptable.

The NRC staff finds that the proposed consolidated EOF meets the intent of the guidance in NUREG-0696 that the building be "well-engineered for the design life of the plant," and be able to withstand adverse conditions of high winds (other than tornadoes) and floods. Based on the above, the NRC staff finds the building structure to be acceptable.

As discussed above, the NRC staff used section 4.2 of NUREG-0696, as supplemented by NSIR/DPR-ISG-01, to evaluate the structure of the proposed consolidated EOF and found it acceptable. Based on the above, the NRC staff finds that the physical structure of the proposed consolidated EOF meets the requirements of 10 CFR 50.47(b)(8).

3.2.2.3 Habitability

Section 4.2 to NUREG-0696, as supplemented by Table 2 of NSIR/DPR-ISG-01 provides guidance that would ensure radiological protection for EOF personnel by providing an adequate ventilation system and radiological protection factor. Similar to the existing Duke Energy consolidated EOF, the proposed consolidated EOF will also be located beyond 10 miles from any of the Duke Energy plants that it serves or other nuclear power plants. EOF functions are unlikely to be impacted by a radiological release from any Duke Energy site due to the distance of the EOF from each respective site. Since the EOF is located at or beyond 10 miles from the TSC from each respective site, Table 2 of NSIR/DPR-ISG-01 states that no specialized ventilation system or protection factor is needed. Therefore, measures to assure the habitability for the proposed consolidated EOF, as described in NUREG-0696 and NSIR/DPR-ISG-01, are not needed, and the proposed consolidated EOF meets the requirements of 10 CFR 50.47(b)(8).

3.2.3 Staffing and Training

Section 4.3 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on EOF staffing and training to provide for the overall management of licensee

resources and the continuous evaluation and coordination of licensee activities during and after an accident. In addition, Section 4.3 to NUREG-0696 provides guidance on the conduct of periodic EOF activation drills in accordance with the licensee's emergency plan.

In its letter dated December 14, 2021, Duke Energy states that

Since Duke Energy has utilized a Common EOF for many years, the ERO personnel assigned to the EOF are experienced in emergency response activities and coordination with offsite agencies. Therefore, an advantage of locating the new EOF within 9 air miles of the current EOF is that the current pool of EOF ERO staff can continue to be leveraged to fulfill ERO roles as required by the Duke Energy Common Emergency Plan. This includes experienced Duke Energy corporate personnel such as those in the Corporate Nuclear Operations organization, Nuclear Engineering, Emergency Preparedness, Regulatory Affairs, and others.

No revisions to the staffing and training requirements in the Duke Energy Common Emergency Plan are necessary due to the relocation of the EOF. Specific lesson plans and training materials are not impacted, except for minor administrative changes (e.g., change of address, telephone numbers, etc.)

In its letter dated December 14, 2021, Duke Energy states that

The current EOF is required to activate within 75 minutes following the declaration of an Alert or higher emergency classification. EOF activation is met when the minimum staff is present, performing their designated functions, and the transfer of Command and Control of non-delegable responsibilities from the Main Control Room (MCR) has occurred. Relocation of the EOF does not affect the requirements for EOF activation, minimum staff, or functions performed in the EOF. The new EOF will continue to meet the activation and staffing requirements as described in the Duke Energy Common Emergency Plan.

Based on the above, the NRC staff has determined that the staffing and training of EOF staff, including ERO response times, and periodic drills and exercises, remains unchanged from that currently described in the Duke Energy Common Emergency Plan. Therefore, the NRC staff concludes that the staffing and training for the proposed consolidated EOF meets the requirements of 10 CFR 50.47(b)(8).

3.2.4 Size

Section 4.4 to NUREG-0696, as supplemented by section IV.1 to NSIR/DPR-ISG-01, provides guidance that the EOF building will be large enough to provide adequate workspace for personnel assigned to the EOF as specified in the licensee's emergency plan, at the maximum level of occupancy without crowding, as well as provide separate office space to accommodate NRC staff and other Federal personnel.

In its letter dated November 14, 2021, Duke Energy states that

The total usable space and working space of the new EOF is sized to meet the criteria in NUREG-0696 to provide for the ERO staff as specified in the Duke Energy Common Emergency Plan, including state, FEMA, and NRC responders, at the expected full staffing of a two site event without crowding.

As with the current EOF, space in the new EOF will be allocated for the functional activities of accident assessment, radiation assessment, offsite monitoring, offsite communications, command and control, services, conferences, NRC personnel, and storage. Space is sufficient for service of equipment, displays, and instrumentation within the new facility. Phones and special communications equipment will be provided as needed throughout the new facility at personnel workstations. Individuals needing plant data will be provided workstations capable of accessing the information. Functional displays of EOF data will be made available through use of computer monitors and video display monitors.

The EOF facilities and equipment for the new EOF remain as described in the Duke Energy Common Emergency Plan and no revisions are necessary.

Attachment 1 provides a floorplan drawing of the new EOF for illustrative purposes and information only.

Based on the above, the NRC staff finds that the proposed consolidated EOF will be of sufficient size to accommodate and support Federal, State, and local responders and licensee ERO personnel, equipment, and documentation in the EOF. The NRC staff used Section 4.4 of NUREG-0696, as supplemented by NSIR/DPR-ISG-01, to evaluate the size of the proposed consolidated EOF and found it acceptable. Based on the above, the NRC staff concludes that the size of the proposed consolidated EOF meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8.c to Appendix E of 10 CFR Part 50.

3.2.5 Radiological Monitoring

The guidance in Section 4.5 of NUREG-0696 specifies that to ensure adequate radiological protection of EOF personnel, radiation monitoring systems should be provided in the EOF. Similar to the existing Duke Energy consolidated EOF, the proposed consolidated EOF will also be located beyond 10 miles from any of the Duke Energy plants that it serves. The NRC staff finds that based on the physical location of the proposed consolidated EOF, EOF personnel are unlikely to be impacted by a radiological release from any nuclear power plant site. Therefore, the radiological monitoring capabilities for EOF personnel, as described in NUREG-0696, are not needed, and the proposed consolidated EOF meets the requirements of 10 CFR 50.47(b)(8).

3.2.6 Communications

Section 4.6 of NUREG-0696 provides guidance to ensure that the EOF has reliable voice communication facilities for communication with the TSC, the control room, NRC, and State and local emergency operations centers, and describes the primary functions of the EOF voice communications facilities.

The NRC staff confirmed that the description of the EOF facilities and equipment related to communications for the proposed consolidated EOF remains consistent with that which is currently described in section F, "Emergency Communications," of the Duke Energy Common Emergency Plan and is equivalent to the existing facility.

In its letter dated December 14, 2021, Duke Energy states that

The Duke Energy Emergency Management Network (DEMNET) is the primary means of communication for the EOF when contacting offsite response organizations (ORO). DEMNET consists of equipment and circuits linking Duke Energy nuclear sites with the offsite agencies involved in initial emergency notifications. This system can conference the offsite agencies for notifications.

In its supplement dated May 13, 2022, Duke Energy states that

Duke Energy will provide telephones in the David Taylor EOF's NRC work area dedicated for the NRC Management Counterpart Link (MCPL), the Emergency Notification System (ENS), and Health Physics Network (HPN).

In its letter dated December 14, 2021, Duke Energy states that

Private Branch Exchange (PBX) is the primary means of communication between Duke Energy site Emergency Response Facilities (ERF) and the EOF. PBX is also the alternate means of communication for the EOF when contacting OROs. PBX is the primary means of communication with the NRC with extensions designated for NRC communications located in the EOF. A PBX is a full featured telephone system that provides internal calling services for one or more locations. The PBX terminates commercial phone lines from a carrier (AT&T, Verizon, CenturyLink, etc.) to provide inbound and outbound calling capabilities between Duke Energy and external parties. PBX systems have a number of mechanisms which make them resistant to failure including, redundant power connections, redundant network connections, and server hardware installed in geographically diverse locations.

Satellite phones are an alternate means of communication between the site ERFs and EOF, an alternate means of communication for the EOF when contacting OROs, and an alternate means of communication for the EOF when contacting Field Monitoring Teams (FMTs). A satellite phone is any mobile telephone capable of sending and receiving phone calls through orbiting satellites.

Cellular phones are an alternate means of communication between the site ERFs and EOF, an alternate means of communication for the EOF when contacting OROs, and are the primary means of communication for the EOF when contacting FMTs. A cellular phone is any mobile telephone (non-Duke Energy or Duke Energy provided) capable of sending and receiving phone calls through ground based cell sites.

Based on the above, the NRC staff finds that the proposed consolidated EOF has sufficient internal and external telecommunications capabilities to support EOF functions for simultaneous events involving multiple sites, based on the functions and staffing currently described in the Duke Energy Common Emergency Plan. The NRC staff used Section 4.6 of NUREG-0696 to evaluate the communications of the proposed consolidated EOF and found it acceptable. The NRC staff concludes that the proposed consolidated EOF will provide for reliable EOF voice and data communications and information collection and, therefore, it meets the requirements of 10 CFR 50.47(b)(8).

3.2.7 Instrumentation, Data System Equipment, and Power Supplies

Section 4.7 of NUREG-0696 provides guidance on equipment to gather, store, and display data needed in the EOF to analyze and exchange information on plant conditions, as well as criteria to perform these functions.

In its letter dated December 14, 2021, Duke Energy states that

The new EOF will have data communication networks installed to provide secure access to plant data and parameters for display in the new EOF in the same manner as the current EOF. There is no change to the Duke Energy Common Emergency Plan descriptions of instrumentation, data system equipment, or power supplies. These networks will be installed in accordance with the criteria of NUREG-0696, Sections 4.7 and 4.8, and 10 CFR 73.54, the cybersecurity rule. Data acquisition will be achieved through a secure proxy server. The server will allow the new EOF to access to the same data points that are available to the Operators in the MCR and emergency responders in the TSC and OSC, including the Safety Parameter Display System (SPDS), via the Duke Energy Wide and Local Area Networks (WAN and LAN). Duke Energy has established an availability goal for the LAN/WAN that exceeds the 0.01 unavailability goal identified in NUREG-0696. The new EOF video display system will display the plant data on screens in the main EOF Area. Commercial broadband connections are provided at various locations to allow ORO and NRC responders to have access to the internet.

Since the new EOF is located offsite, its electrical equipment loads will not affect any safety related power source at a site. Loss of primary commercial power would not cause loss of any stored data vital to EOF functions. Historical data from the site will be accessible from a historical data base. This information could be accessed by the new EOF, as needed, once power is restored to the LAN.

Primary power to the David Taylor building is provided by a single feeder using commercial power from the Duke Energy Mineshaft Retail circuit to each of the building's switchgears. Backup power to the David Taylor building is achieved using two 100% capacity diesel generators that provide redundant power to both of the building's switchgears. Each diesel generator is capable of carrying the electrical load of the entire David Taylor building, including the EOF, and all electrical outlets, HVAC, lighting fixtures, and the wiring closet that supports both the voice and data communications in the new EOF. There is enough fuel on-site to operate at least one backup diesel generator for several days.

The workstations and related LAN/WAN equipment require AC power to operate. A loss of AC power to the equipment, located at numerous locations throughout the Duke Energy system, will cause a loss of this capability. Backup power is available for the LAN equipment supporting the new EOF and the core network equipment in the David Taylor building, as described above. In addition, the voice and data communications equipment supporting the new EOF is connected to an Uninterruptable Power Supply (UPS) system. The UPS system ensures electrical power is supplied to the voice and data equipment after a loss of commercial power, but before the backup diesel generators begin carrying the electrical load of the building. Thus, a loss of commercial power will not cause a loss of, or interruption in, any of the voice or data communications equipment located in the new EOF.

Based on the above, the NRC staff finds that the proposed consolidated EOF provides for reliable EOF instrumentation, data system equipment, and power supplies. The NRC staff used Section 4.7 of NUREG-0696 to evaluate the instrumentation, data system equipment, and power supplies of the proposed consolidated EOF and found it acceptable. Therefore, the NRC staff concludes that the proposed consolidated EOF will provide for reliable equipment to gather, store, and display data needed in the EOF to analyze and exchange information on plant conditions and that it meets the requirements of 10 CFR 50.47(b)(8)-(9) and paragraph IV.E.8.c of Appendix E to 10 CFR Part 50.

3.2.8 Technical Data and Data System

Section 4.8 of NUREG-0696 provides guidance on the technical data system needed to receive, store, process, and display information sufficient to perform assessments of the actual, and potential onsite and offsite environmental consequences of an emergency condition.

In its letter dated December 14, 2021, Duke Energy states that

The new EOF will have the capability to receive, store, process, and display vital plant data and radiological information for each site and unit, in near real time, to be used by knowledgeable individuals responsible for providing technical briefings on plant conditions, event prognosis, and for management of overall emergency response in the same manner as the current EOF. The proxy server described in Section 3.7 will allow the display of data points that cover Type A, B, C, D, and E variables discussed in NUREG-0696, Section 4.8. In addition, the meteorological variables required for dose assessment will be made available through the proxy server. This data will also be accessible from a historical data base. There is no change to the Duke Energy Common Emergency Plan description of technical data or the data system.

Offsite dose assessment will continue to be performed in the new EOF, same as the current EOF, for all operating Duke Energy sites using the Unified RASCAL Interface (URI) software. URI is used by qualified EOF staff in the event of an actual or potential release of airborne radioactivity to the environment for evaluation of emergency action levels and PARs. There is no change to the Duke Energy Common Emergency Plan description of the methods, models, or performance of dose assessment.

Based on the above and review of the licensee's submittal, the NRC staff confirmed that the description of the offsite dose assessment capabilities at the proposed consolidated EOF will continue to be performed using the existing dose assessment computer analysis program at Duke Energy's nuclear generating stations in the event of an actual or potential release of airborne radioactivity to the environment.

The NRC confirmed that the proposed consolidated EOF data system is unchanged from the current consolidated EOF and would continue to comply with data display and data storage requirements discussed in section 4.8 of NUREG-0696. The capability to include sensor data of the Type A, B, C, D, and E variables would satisfy methods described in Regulatory Guide 1.97, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants" (Reference 22), and the meteorological variables required by both Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants" (Reference 23), and NUREG-0654.

Based on the above, the NRC staff finds that the proposed consolidated EOF provides for reliable EOF technical data and data systems. The NRC staff used Section 4.8 of NUREG-0696

to evaluate the technical data and data systems of the proposed consolidated EOF and found it acceptable. Therefore, the NRC staff concludes that the proposed consolidated EOF will provide for the sufficient receipt, storage, processing, and display of information to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition and that it meets the requirements of 10 CFR 50.47(b)(8)-(9) and paragraph IV.E.8.c of Appendix E to 10 CFR Part 50.

3.2.9 Records Availability and Management

Section 4.9 of NUREG-0696, as supplemented by section IV.I of NSIR/DPR-ISG-01, provides guidance on the ready access to up-to-date plant records, procedures, and emergency plans needed to exercise overall management of licensee emergency response resources. The proposed consolidated EOF will have access to site reference materials that may be needed for supporting emergency response, in the same manner as the current EOF.

In its letter dated November 14, 2021, Duke Energy states that

The new EOF will have access to site reference materials that may be needed for supporting emergency response, in the same manner as the current EOF. Typically, reference materials are accessed electronically. Examples of these documents include:

- Plant Technical Specifications
- Plant operating procedures
- Emergency operating procedures
- Emergency Plan Implementing Procedures
- Final Safety Analysis Reports
- Emergency plans – Common Plan, Site Annexes, and state emergency plans
- Evacuation Time Estimate Reports – contain offsite population data and evacuation plans
- Licensee employee radiation exposure history
- Drawings, diagrams, and other design information for each site

Copies of reference materials and procedures required for the EOF to perform its function as described in the Duke Energy Common Emergency Plan will be available.

Based on the above, the NRC staff finds that the proposed consolidated EOF provides for adequate records availability and management. The NRC staff used Section 4.9 of NUREG-0696 to evaluate the records availability and management of the proposed consolidated EOF and found it acceptable. Therefore, the NRC staff finds that the proposed consolidated EOF provides for records availability and management and meets the requirements of 10 CFR 50.47(b)(8).

3.2.10 Summary

The NRC staff finds that the use of the proposed consolidated EOF at the new location (Duke Energy office building at 9700 David Taylor Drive, Charlotte, North Carolina) coupled with the use of the current common EOF at the current location (526 South Church Street, Charlotte, North Carolina) as a near-site annex by the CNS, will continue to fulfill necessary emergency response functions and effectively support Duke Energy's emergency response at all the sites that it supports. Therefore, the relocation of the current consolidated EOF to the new location and the use of that common EOF by the CNS (as well as ONS, MNS, BNP, RNP, and HNP) is

acceptable.

3.3 NRC STAFF CONCLUSION

Based on the above, the NRC staff concludes that the proposed relocation of the existing Duke Energy common EOF to the Duke Energy building at 9700 David Taylor Drive, Charlotte, North Carolina would fulfill necessary emergency response functions, would continue to meet 10 CFR 50.47 and Appendix E of 10 CFR Part 50, and the criteria set forth in applicable guidance and is, therefore, acceptable. Given the technological capabilities of the proposed Duke Energy common EOF, its capacity to address multi-site events, and the staffing of emergency response organizations comprised of experienced and diverse personnel from the Duke Energy corporate offices, the relocation of the existing Duke Energy common EOF would not adversely impact the ability of the proposed common EOF to effectively support Duke Energy's emergency response at all the sites that the facility serves. Moreover, the NRC staff concluded that the provisions made for locating NRC and offsite responders closer to the nuclear power reactor sites so that they can interact face-to-face with emergency response personnel entering and leaving the reactor sites are acceptable. As such, the NRC would have reasonable assurance that adequate protective measures can and will be implemented in the event of a radiological emergency at any of the sites that the Duke Energy common EOF serves.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, States of North Carolina and South Carolina officials were notified of the proposed issuance of the amendments on November 14, 2022. The NRC staff have received no comments from the State officials.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on February 22, 2022 (87 FR 9647). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter from Duke Energy Progress, LLC to U.S. Nuclear Regulatory Commission, "License Amendment Request to Relocate the Duke Energy Emergency Operations Facility," dated December 14, 2021 (Agencywide Documents Access and Management System Accession No. ML21348A003).
2. Letter from Duke Energy Progress, LLC to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information (RAI) Regarding License Amendment Request for Relocating the Duke Energy Emergency Operations Facility, dated May 13, 2022 (ML22133A218).
3. Letter from Duke Energy Progress, LLC to U.S. Nuclear Regulatory Commission, "Supplemental Information Regarding License Amendment Request for Relocating the Duke Energy Emergency Operations Facility," dated September 15, 2022 (ML22258A295).
4. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, NUREG-0654/FEMA-REP-1, Revision 2, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Final Report, dated December 2019 (ML19347D139).
5. U.S. Nuclear Regulatory Commission, NUREG-0696, "Functional Criteria for Emergency Response Facilities," dated February 1981 (ML051390358).
6. U.S. Nuclear Regulatory Commission, NSIR/DPR-ISG-01, Revision 0, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants," dated November 2011 (ML113010523).
7. Letter from Duke Power Company to U.S. Nuclear Regulatory Commission, "Response to Supplement 1 to NUREG-0737," dated April 14, 1983 (ML17093A805).
8. Letter from U.S. Nuclear Regulatory Commission to Duke Power Company, "Emergency Operations Facilities Review (McGuire and Catawba Nuclear Stations)," dated August 18, 1983 (ML17093A806).
9. U.S. Nuclear Regulatory Commission, Supplement No. 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements, Requirements for Emergency Response Capability," reprinted February 1989 (original published January 1983) (ML102560009).
10. U.S. Nuclear Regulatory Commission, "Oconee Nuclear Station, Units 1, 2, and 3 (Oconee) - Incorporation of the Oconee Emergency Operations Facility (EOF) into the EOF Shared by Catawba and McGuire Nuclear Stations," dated January 10, 2006 (ML053220014).
11. U.S. Nuclear Regulatory Commission, SRM - SECY-05-0172, "Duke Power Company's Request to Incorporate the Oconee Emergency Operations Facility into the EOF Shared by Catawba and McGuire Nuclear Stations," dated November 2, 2005 (ML053070025).

12. U.S. Nuclear Regulatory Commission, CLI-16-19, "Commission Memorandum and Order," dated December 15, 2016 (ML16350A070).
13. U.S. Nuclear Regulatory Commission, "William States Lee III Nuclear Station Unit 1 and Unit 2 Combined Operating Licenses," dated December 19, 2016 (ML16333A329 and ML16333A331, respectively).
14. U.S. Nuclear Regulatory Commission, SRM - SECY-17-0050, "Duke Energy Proposal to Further Consolidate Duke Corporate Emergency Operations Facility," dated May 17, 2017 (ML17137A116).
15. U.S. Nuclear Regulatory Commission, SECY-22-0090, "Duke Energy Request to Relocate the Emergency Operations Facility," dated September 22, 2022 (ML22265A133).
16. U.S. Nuclear Regulatory Commission, SRM - SECY-22-0090, "Duke Energy Request to Relocate the Emergency Operations Facility," dated February 9, 2023 (ML23040A305).
17. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, "Memorandum of Understanding Between the Department of Homeland Security/FEMA and NRC Regarding Radiological Response, Planning, and Preparedness," dated December 7, 2015 (ML15344A371).
18. Letter from Federal Emergency Management Agency to U.S. Nuclear Regulatory Commission, "Request for Federal Emergency Management Agency Consultation on the Duke Energy Proposal to Relocate the Consolidated Emergency Operations Facility," dated April 12, 2022 (ML22102A316).
19. Letter from Duke Energy to U.S. Nuclear Regulatory Commission, "Request for Emergency Operations Facility (EOF) Consolidation," dated April 29, 2016 (ML16120A076).
20. Letter from U.S. Nuclear Regulatory Commission to Southern Nuclear Operating Company, Inc., "Joseph M. Farley Nuclear Plant, Units 1 and 2; Edwin I. Hatch Nuclear Plant, Units 1 and 2; and Vogtle Electric Generating Plant, Units 1,2,3, and 4; Issuance of Amendments Regarding the Relocation of the Emergency Operations Facility (CAC Nos. MG0188, MG0189, MG0190, MG0191, MG0192, MG0193, MG0194, and MG0195; EPID L-2017-LLA-0293)," dated July 26, 2018 (ML18183A073).
21. Letter from Southern Nuclear, "Joseph M. Farley Nuclear Plant- Units 1 and 2; Edwin I. Hatch Nuclear Plant - Units 1 and 2; Vogtle Electric Generating Plant - Units 1 and 2; Vogtle Electric Generating Plant - Units 3 and 4, Submittal of License Amendment Request Relocation of the Emergency Operations Facility," dated August 30, 2017(ML17243A202).
22. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.97, Revision 4, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants," dated June 2006 (ML18136A762).

23. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.23, Revision 1, "Meteorological Monitoring Programs for Nuclear Power Plants," dated March 2007 (ML070350028).
24. U.S. Nuclear Regulatory Commission, SECY-17-0050, "Duke Energy Proposal to Further Consolidate Duke Corporate Emergency Operations Facility," dated April 14, 2017 (ML16363A431).
25. Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "Brunswick Steam Electric Plant, Units 1 and 2; Shearon Harris Nuclear Power Plant, Unit 1; H. B. Robinson Steam Electric Plant, Unit No. 2; and Oconee Nuclear Station, Units 1, 2, and 3 – Issuance of Amendments to Consolidate Emergency Operations Facilities and Associated Emergency Plan Changes," dated August 21, 2017 (ML17188A387).

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