TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

UniStar Nuclear Energy, LLC (UNE) and UniStar Nuclear Operating Services, LLC (UNO) (Co-Applicants) are proposing to construct and operate a new nuclear power unit on the existing Calvert Cliffs Nuclear Power Plant (CCNPP) site. The new unit will be designated as CCNPP Unit 3. The purpose of the proposed new nuclear power unit is to generate electricity for sale at wholesale.

This Technical Report in support of the Co-Applicants' Application for a Certificate of Public Convenience and Necessity (CPCN) (Technical Report) addresses the application requirements of the Maryland Annotated Code, Public Utility Companies Article, and the Code of Maryland Regulations (COMAR),Title 20 Public Service Commission, Subtitle 79, "Applications Concerning the Construction or Modification of Generating Stations and Overhead Transmission Lines," i.e., COMAR 20.79.01-.04.

1.1 THE CO-APPLICANTS

UNE and UNO, two members of the UniStar family of businesses, are the Co-Applicants for the CPCN to construct Calvert Cliffs Unit 3.

UNE

UNE is a joint venture between Constellation Energy Group, Inc.'s ("CEG")[1] nuclear subsidiary, Constellation Energy Nuclear Group, LLC ("CENG")[2] and Electricité de France ("EDF"). CEG is a Fortune 200 competitive energy company based in Baltimore, Maryland, and is one of the nation's largest energy companies, with total assets of over $21 billion. EDF is the largest nuclear plant owner and most experienced nuclear operator in the world.[3] EDF is also the largest utility in France, where nuclear power provides approximately 80% of the electricity.

As its contribution to the joint venture, EDF is investing up to $625 million in UNE. CENG is contributing its UniStar nuclear-related companies and interests and the land on which Calvert Cliffs Unit

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1 CEG, through its various subsidiaries, is a major generator of electricity, with a diversified fleet of more than 78 power plants (fossil, renewable, and nuclear) strategically located throughout the United States and a generating capacity of approximately 8,700 MW. The output of CEG's plants is sold to many of the nation's leading distribution utilities, energy companies, and cooperatives.

2 The principal offices of CENG are located in Baltimore, Maryland. CENG, formed in 1999 under the name Constellation Generation Group, LLC, is a Maryland limited liability company and a wholly-owned subsidiary of CEG. Constellation Generation Group, LLC changed its name to CENG on October 1, 2007. CENG's wholly-owned subsidiaries currently own and operate five nuclear power plants: CCNPP Units 1 and 2; the R.E. Ginna plant near Rochester, New York; and two units at Nine Mile Point in Oswego, New York. These units safely produce approximately 3,930 MW of base-load capacity while maintaining a high average capacity (availability) factor. These nuclear power plants have consistently achieved favorable ratings for safety and performance from regulatory bodies, including the NRC.

3 EDF's participation in UNE is through its subsidiary, EDF Development Inc., a Delaware corporation.

3 will be built to UNE.[4] UNE will be the vehicle through which CEG, CENG, and EDF will pursue new nuclear power generation opportunities in North America. Under the UNE governance structure and in accordance with the requirements of the U.S. Nuclear Regulatory Commission ("NRC"), CENG will have ultimate control over all safety-related issues, regulatory decisions, and certain key corporate control and budgetary measures.[5] Michael J. Wallace, the President of CENG, is also the Chairman of UNE's Board of Directors.

UNE has announced its intention to bring together experienced nuclear owners, operators and investors to develop, own, and operate a fleet of standardized advanced nuclear power plants, representing some of the first nuclear power plants licensed and built in the United States in thirty years. If successful, these efforts will fulfill a recognized need to increase base-load electric generation capacity that is environmentally friendly and carbon emissions-free.

Although UNE is currently the proposed owner of Calvert Cliffs Unit 3, at a future date, UNE will likely hold its ownership in a newly formed entity established for the sole purpose of owning the unit. When that special purpose entity is formed, the Co-Applicants will amend this application and inform the Commission of this change in ownership. This new ownership entity may have passive financial investors. Nevertheless, the majority ownership and control of Calvert Cliffs Unit 3 will remain in UNE.

UNO

UNO is a Delaware limited liability company with its principal place of business in Baltimore, Maryland. UNO is currently a wholly-owned subsidiary of UNE, formed for the purpose of being a licensee and operator of nuclear power plants. UNO will be the operator of Calvert Cliffs Unit 3. It is anticipated that in the future UNO will cease to be wholly owned by UNE and will instead have a consortium of active investors who will be experienced United States owners and operators of nuclear facilities who choose to do business (license, develop, construct, operate, and maintain nuclear power plants) under this UniStar business model. Nevertheless, UNE will continue to be the majority owner and will maintain operational control of UNO.

The following information is submitted in accordance with COMAR 20.79.01-.04:

The name and address of the legal entities that are applying for the CPCN and seeking Public Service Commission (PSC) approval are:

UniStar Nuclear Energy, LLC
UniStar Nuclear Operating Services, LLC
(Co-Applicants)

4 Under the terms of the UNE joint venture agreement, CENG has agreed to require its subsidiary, Calvert Cliffs Nuclear Power Plant, Inc., the owner of Units 1 and 2, to transfer the land on which Unit 3 will be built to UNE or to a special purpose entity that will be formed for the purpose of owning Unit 3.

5 *See* 42 U.S.C. § 2133(d); 64 Fed. Reg. 52355 (Sept. 28, 1999).

The Co-Applicants' address of Principal Business Office is:

750 E. Pratt Street
Baltimore, MD 21202

The person authorized to receive notices and communications is:

Rod M. Krich
Senior Vice President, Regulatory Affairs
UniStar Nuclear Operating Services, LLC
Senior Vice President, Regulatory Affairs
UniStar Nuclear Energy, LLC
750 E. Pratt Street, 14th Floor
Baltimore, MD 21202

Charles O. Monk, II
Saul Ewing LLP
500 E. Pratt Street, 9th Floor
Baltimore, MD 21202

Deborah E. Jennings
DLA Piper US LLP
111 S. Calvert St., Suite 1950
Baltimore, MD 21202

The CPCN application will be available for public inspection at Calvert County Public Library, Southern Branch, 20 Appeal Lane, Lusby, Maryland 20657.

1.2 PROJECT OVERVIEW

The CCNPP campus, currently owned by Calvert Cliffs Nuclear Power Plant, Inc., consists of 2,070 acres (838 hectares) near Lusby, Calvert County, Maryland, on the west bank of the Chesapeake Bay, approximately halfway between the mouth of the bay and its headwaters at the Susquehanna River. The site is approximately 40 mi (64 km) southeast of Washington, D.C. and 7.5 mi (12 km) north of Solomons Island, Maryland.

The approximately 1,108 acre South Parcel upon which CCNPP Unit 3 is to be constructed will be conveyed to UNE or a special purpose entity owned by UNE before construction begins. Construction of CCNPP Unit 3 will require use of approximately 420 acres of the 2,070 acre Calvert Cliffs campus, of which 281 acres will be permanently used by CCNPP Unit 3 and its supporting facilities. Most of the construction and permanent use areas will be located upon the South Parcel, but some of the construction and permanent use areas will be located upon the North Parcel pursuant to easements granted by the owner of CCNPP Units 1 and 2 to UNE or the special purpose entity owned by UNE.

1.2.1 Reactor Information

The proposed CCNPP Unit 3 consists of one pressurized water reactor steam electric system of the AREVA U.S. EPR design. The rated core thermal power will be 4,590 MWt. The rated and design gross electrical output is approximately 1,710 MWe.

In a nuclear power plant, the reactor is the part of the facility in which the heat, necessary to produce steam, is generated by fission of atom nuclei. The steam drives a turbine generator, which generates electricity. The nuclear steam supply system is therefore the counterpart of coal-, gas- or oil-fired boilers of fossil-fueled plants.

In a pressurized water reactor (PWR) like the U.S. EPR, ordinary water is used to remove the heat formed inside the reactor core by the nuclear fission process. This water also slows down (or moderates) neutrons (constituents of atom nuclei released in the nuclear fission process). Slowing down neutrons is necessary to continue the chain reaction (neutrons have to be moderated to be able to sustain fission).

The heat produced inside the reactor core is transferred to the turbine through four water-to-water heat exchangers called "steam generators." There is no water exchanged between the reactor core coolant circuit (primary circuit) and the steam/water circuit (secondary circuit) used to spin the turbine. Only heat, not water, is transferred in the steam generators.

The primary water is pumped through the reactor core and the primary side of the steam generators, in four parallel closed loops, by electric motor-powered coolant pumps. Each loop is equipped with a steam generator and a coolant pump.

The reactor operating pressure and temperature are such that the cooling water does not evaporate and remains in the liquid state, which intensifies its cooling efficiency. A pressurizer controls the pressure; it is connected to one of the four loops.

The feedwater entering the secondary side of the steam generators absorbs the heat transferred from the primary side and boils to produce saturated steam. The steam is dried in the steam generators, then routed to the turbine to drive it. The steam is then condensed and returns as feedwater to the steam generators.

The generator, driven by the turbine, generates electricity. Figure 1.2-1.

1.2.2 Cooling System Information

The two major cooling systems interacting with the environment are the Circulating Water System (CWS) and the Essential Service Water System (ESWS).

1.2.2.1 Circulating Water System

The U.S. EPR will use a CWS and associated hybrid cooling tower to dissipate waste heat during normal plant operation at full station load. This is a closed-cycle, wet cooling system. The heated cooling water from the main condenser is sent to the spray headers of the cooling tower, where heat content of the cooling water is transferred to the ambient air via evaporative cooling and conduction. After passing through the cooling tower, the cooled water is recirculated back to the main condenser to complete the closed cycle cooling water loop. Makeup water from the Chesapeake Bay is required to replace evaporative water losses, drift losses, and blowdown discharge from the CWS cooling tower. The hybrid cooling tower is designed with a plume abatement system to eliminate any visible water vapor plume from the tower.

Makeup water for the CWS will be taken from the Chesapeake Bay by pumps installed in a new intake structure located south of the existing CCNPP Units 1 and 2 intake structure. The makeup water is pumped through a common header directly to the cooling tower basin. Blowdown from the cooling tower discharges to a common retention basin to provide retention time for the settling of suspended solids and

to permit further chemical treatment of the wastewater, if required, prior to discharge to the Chesapeake Bay.

1.2.2.2 Essential Service Water System

The U.S. EPR design has a safety-related ESWS to provide cooling water to the Component Cooling Water System (CCWS) heat exchangers and to the cooling jackets of the emergency diesel generators (EDG). The ESWS is used for normal operations, refueling, shutdown/cooldown, anticipated operational events, design basis accidents and severe accidents. The ESWS is a closed-loop system with four safety-related trains and one non-safety-related dedicated (severe accident) train to dissipate design heat loads. Each safety-related train uses one of the four safety-related two-cell mechanical draft cooling towers to dissipate heat during normal conditions, shutdown/cooldown, or design basis accident conditions. The non-safety-related train uses its associated safety-related train ESWS Ultimate Heat Sink (UHS) cooling tower to dissipate heat under severe accident conditions. The ESWS water is pumped to the CCWS heat exchanger and to the emergency diesel generator cooling jacket for the removal of heat. Each of the four ESWS cooling towers has a dedicated CCWS heat exchanger to maintain separation of the safety-related trains. Heated ESWS water returns through piping to the spray distribution header of the UHS cooling tower. Water exits the spray distribution piping through spray nozzles and falls through the tower fill. Two fans provide upward air flow to remove latent and sensible heat from the water droplets as they fall through the tower fill, releasing heat from the service water to the atmosphere. The heated air will exit the tower and mix with ambient air, completing the heat rejection process. The cooled water is collected in the tower basin for return to the pump suction for recirculation through the system. Each ESWS cooling tower has a dedicated ESWS pump. An additional pump connected to one ESWS train supplies the severe accident train.

A desalination plant processing water from the Chesapeake Bay will provide normal makeup water to the ESWS system. The desalination plant gets water from the Chesapeake Bay via the CWS intake structure. Water rejected from the desalination plant is directed into the CWS blowdown retention basin.

1.2.3 Transmission Line Information

CCNPP Unit 3 will use the existing transmission system; thus, no additional offsite transmission corridors or other offsite land use would be required to connect the new reactor unit to the existing electrical grid. The existing transmission system consists of two circuits, the North Circuit, which connects the CCNPP site to the Waugh Chapel Substation in Anne Arundel County, and the South Circuit, which connects the CCNPP site to the Chalk Point Substation in Prince George's County. The North Circuit is composed of two separate three-phase 500 kV transmission lines run on a single right-of-way from the CCNPP site, while the South Circuit is a single three-phase 500 kV line.

On the CCNPP site, the following facilities will be constructed:

- One new 500 kV substation to transmit power from CCNPP Unit 3,
- Two new 500 kV, 3,500 MVA circuits, 1.0 mi (1.6 km) in length, on individual towers, connecting the CCNPP Unit 3 substation to the existing CCNPP Units 1 and 2 substation and indirectly to the grid, and
- Two existing 500 kV, 3,500 MVA circuits that are currently connected to the existing Units 1 and 2 substation will be disconnected from that substation and extended one mile (1.6 km), on individual towers, to the Unit 3 substation.

Numerous breaker upgrades and associated modifications will also be required at Waugh Chapel, Chalk Point, and other substations. All of the offsite modifications will be implemented within the existing substations.

Onsite line routing will be conducted so as to avoid or minimize any impact on the existing Independent Spent Fuel Storage Installation, wetlands, or threatened and endangered species identified in the local area. The final design of the new and relocated transmission lines has not been completed, but the layout of the new lines will not have any impact on the existing transmission corridor, and all new line construction will be contained within the CCNPP site property lines. No changes to the offsite corridors are required.

1.3 REGULATORY AGENCIES REQUIRING PERMITS OR APPROVALS

A compilation of authorizations required by the proposed project is provided in Table 1.3-1. Also listed in Table 1.3-1 are authorizations that are contingent on project characteristics that have not yet been finalized. Copies of the authorization applications required to be submitted with this CPCN application are included in Appendix C:

- Application for Air Permit to Construct Application for Processing/Manufacturing Equipment and Fuel Combustion Equipment
- Application to Appropriate and Use Waters of the State
- Joint Federal/State Application for the Alteration of any Tidal Wetland in Maryland
- Joint Federal/State Application for the Alteration of any Floodplain, Waterway, Tidal, or Nontidal Wetland in Maryland

1.4 PROJECT SCHEDULE

The major milestones associated with the installation and initial operation of CCNPP Unit 3 are summarized in Table 1.4-1.

1.5 CPCN APPLICATION REQUIREMENTS

The requirements for applying for a CPCN are specified in Sections 7-207 and 7-208 of the Maryland Annotated Code, Public Utility Companies Article, and in COMAR, Title 20 Public Service Commission, Subtitle 79, "Applications Concerning the Construction or Modification of Generating Stations and Overhead Transmission Lines." The CPCN application and this Technical Report with associated appendices demonstrate the Co-Applicants' ability to conform to the applicable environmental standards. Table 1.5-1 lists the application filing requirements. Table 1.5-2 lists the requirements applicable to generating stations. Each table also provides a cross-reference to the location of the required information in this Technical Report.

The NRC regulates the construction and operation of nuclear power facilities in the United States. The application process for obtaining a COL for Unit 3 from the NRC has commenced. The potential radiological impacts associated with the construction and operation of CCNPP Unit 3 and certain safety-related procedures are addressed in the COL application and are subject exclusively to NRC regulatory jurisdiction. Consequently, these subjects are not addressed in this Technical Report. However, the Co-Applicants are prepared to provide on an informational basis such safety-related information, subject to

the limitations imposed by NRC regulations and the various Department of Homeland Security Regulations, as the PSC may deem necessary.

1.6 ORGANIZATION OF THE TECHNICAL REPORT

This introduction (Section 1.0) provides all information required by COMAR 20.79.01.-04. Section 2.0 of this report contains a description of the new generating station as required by COMAR 20.79.03(A) - (H). The environmental baseline and impact information required by COMAR 20.79.03.02 is included in Sections 3.0 through 6.0 of this document. Finally, this report includes several appendices that provide additional information in support of the CPCN application for CCNPP Unit 3. Appendix C contains copies of permit applications to the Maryland Department of the Environment (MDE) that need to be submitted at the same time as this CPCN application. Appendix A contains copies of the numerous environmental studies that have been prepared by the Co-Applicants in connection with this project.

Table 1.3-1 Federal, State and Local Authorizations

Agency	Authority	Requirement	Approval Status	Waiver or Variance
U.S. Nuclear Regulatory Commission (USNRC)	10 CFR 40	Source Material License Possession, use and transfer of source material		
USNRC	10 CFR 52, Subpart C	COL Combined license for a nuclear power station, including Environmental Impact Statement		
USNRC	10 CFR 70	Special Nuclear Material License Possession, delivery, receipt, use, transfer of fuel		
USNRC	10 CFR 30	By-Product Material License Production, transfer, receipt, acquisition, ownership, possession of nuclear by-product materials		
USNRC	10 CFR 52.80 10 CFR 50.10	Limited Work Authorization (LWA) [(b)] Safety-related construction prior to issuance of COL conditionally authorized by NRC		
Federal Aviation Administration (FAA)	49 USC 44718 14 CFR 77.13	Construction Notice Construction of structures (>200 feet) affecting air navigation		
US Army Corps of Engineers (USACE)	33 USC 1344 33 CFR 322 33 CFR 323 33 USC 403	Individual Permit Excavation, dredging, and/or disposal of dredged material in navigable waters; filling of waters of U.S.; needed for construction/ modification of the discharge structure, barge slip upgrade, and any filling of waters of U.S.		

Agency	Authority	Requirement	Approval Status	Waiver or Variance
U.S. Fish and Wildlife Services (USFWS)	16 USC 1531 et seq. 50 CFR 402	Consultation regarding potential to adversely impact protected species (non-marine species) and critical habitats to identify protected species and critical habitats onsite and in the vicinity, assess project construction and/or operation impacts, and concur on appropriate mitigation		
USFWS	16 USC 703 et seq. 50 CFR 21	Migratory Bird Permit Adverse impacts on protected species and/or their eggs or nests due to site operations		
National Marine Fisheries Service (NMFS)	16 USC 703 et seq. 50 CFR 402	Consultation regarding potential to adversely impact protected species (marine species) and critical habitats to identify protected species and critical habitats onsite and in the vicinity, assess project construction and/or operation impacts, and concur on appropriate mitigation		
NMFS	16 USC 1801 et seq.	Consultation regarding potential impacts to essential fish habitat (EFH) to identify EFH in the site vicinity, assess project operations impacts, and concur on appropriate mitigation		
US Department of Transportation	49 CFR 107, Subpart G	Hazardous Materials Certificate of Registration Transportation of hazardous materials		
U.S. Environmental Protection Agency (USEPA)/ Maryland Department of the Environment (MDE)	40 CFR 262.12 COMAR 26.13.03	Notification of Regulated Waste Activities (USEPA Identification Number) Generation and storage of hazardous waste for <90 days (made through MDE)		
USEPA	40 CFR 60, Subpart Kb	Record of storage tank dimensions and analysis showing tank capacity for construction of petroleum liquid storage vessel		

Agency	Authority	Requirement	Approval Status	Waiver or Variance
USEPA	40 CFR 82.162	Ozone-Depleting Substance (ODS) Compliance Certification Recovery and recycling of ODS		
MDE	16 USC 1451 et seq. 15 CFR 930.57	Coastal Zone Management Act Consistency Certification Any activity that could affect the state's coastal zone resources		
MDE	33 USC 1341 COMAR 26.08.02.10	Section 401 Water Quality Certification Compliance with state water quality standards		
MDE	33 USC 1342 COMAR 26.08.04	National Pollutant Discharge Elimination System (NPDES) Permit Discharge of industrial wastewater and stormwater during operation		
MDE	COMAR 26.08.04.09	General NPDES Permit for Stormwater Associated with Construction Activity Discharge of stormwater during construction		
MDE	COMAR 26.17.04	Waterway and 100-Year Floodplain Permits Any activity that changes the course, current, or cross-section of a nontidal stream or body of water, including the 100-year floodplain		
MDE	COMAR 26.17.01	Erosion and Sediment Control Plan Land clearing, grading, or other earth disturbance (construction)		
MDE	COMAR 26.17.02	Stormwater Management Plan Land development activity (construction and operation)		
MDE	COMAR 26.03.12	Major Water Facilities Permit Construction of potable water supply system		

Agency	Authority	Requirement	Approval Status	Waiver or Variance
MDE	COMAR 26.03.12	Major Sewerage System Permit Construction of sanitary waste treatment system for operation		
MDE	COMAR 26.04.06	Sewage Sludge Utilization Permit Disposal of sludge from sewage treatment plant		
MDE	COMAR 26.12.01.01	State Radioactive Materials License Possession, use, acquisition, ownership, transfer of radioactive materials not regulated by NRC		
MDE	COMAR 26.04.07	Solid Waste Disposal Facility Permit On-site disposal of land-clearing and construction debris		
MDE	COMAR 26.10.01.07	Oil Operations Permit Storage of oil in aboveground storage tanks >10,000 gal and/or >1,000 gal of used oil		
MDE	COMAR 26.11.02.13	State Air Permit to Operate Issued after start-up per permit to construct; operation of construction phase air pollutant emission sources		
MDE	COMAR 26.11.03 20.79.03.02(B)(2)(c)	Title V Operating Permit Revision Operation of Unit 3 added to existing facility major stationary source Title V permit		
Chesapeake Bay Critical Area (CBCA) Commission	COMAR 27.02	CBCA Conformance Construction and operation of an electric generating facility in the CBCA		

Agency	Authority	Requirement	Approval Status	Waiver or Variance
State Historic Preservation Office/ Maryland Historic Trust	16 USC 470 et seq. 36 CFR 800	Cultural Resources Review and Consultation Identification, description, and evaluation of cultural resources on and in the site vicinity with the potential to be impacted by plant construction and/or operations; concurrence on appropriate mitigation		
Maryland State Highway Administration	Md. Code Ann., Transp. § 8-625 COMAR 11.04.05	Highway Access Permit Construction of new or modified entrances on state highways		
Calvert County Department of Planning and Zoning	Calvert County Code, Ordinances and Resolutions Chapter 38, Erosion and Sediment Control	County Grading Permit and Erosion and Sediment Control Plan Clearing and grading of land and implementation of soil erosion and sediment controls		
Calvert County Department of Planning and Zoning	Calvert County Code, Ordinances and Resolutions Chapter 18, Building Construction	County Building Permit and Related Site Development Plan Construction of buildings and other structures, demolition of certain structures, and movement of certain structures at Camp Conoy		
Calvert County Department of Planning and Zoning; Inspections and Permits	Calvert County Code, Ordinances and Resolutions Chapter 18, Building Construction	County Use and Occupancy Permit Use and occupancy of buildings		
Tennessee Department of Environment and Conservation – Division of Radiological Health	Tenn. Department of Environment and Conservation Rule 1200-2-10.32	Tennessee Radioactive License-for Delivery Transportation of radioactive waste into the State of Tennessee (below regulatory limits material)		
State of Utah Department of Environmental Quality, Division of Radiological Control	Utah Radiation Control Rules R313-26	General Site Access Permit Transportation of radioactive waste into the State of Utah		

Table 1.4-1 Estimated Implementation Schedule for the Project

Milestone	Action	Completion Date
1	Submit Environmental Report to NRC	July 2007
2	Submit CPCN Application to Maryland Public Service Commission	November 2007
3	Start Detailed Engineering	Fourth Quarter 2007
4	Submit Design Certification Application to NRC for the U.S. EPR	December 2007
5	Submit Limited Work Authorization Application to NRC	March 2008
6	Submit Remainder of COL Application to NRC	March 2008
7	Maryland Public Service Commission Issues CPCN	December 2008
8	Site Preparation and Non-Safety Related Construction Begins	January 2009
9	NRC Issues Limited Work Authorization	December 2009
10	NRC Issues Design Certification for U.S. EPR	October 2010
11	NRC Issues COL	March 2011
12	Safety-Related Plant Construction Begins	April 2011
13	Plant Construction Complete	July 2015
14	Plant Startup Testing Begins	July 2015
15	Commercial Operation Begins	December 2015

Table 1.5-1 Applicable General CPCN Requirements

Title 20, Subtitle 79 Chapter 01 General Requirements	**CPCN Technical Report Section**
.04 Application Filing Requirements	
A. The name of the applicant	1.1
B. The address of the principal business office of the applicant	1.1
C. The name, title, and address of the person authorized to receive notices and communications with respect to the application	1.1
D. The location or locations at which the public may inspect a copy of the application	1.1
E. A list of each local, state, or federal government agency having authority to approve or disapprove the construction or operation of the project and containing a statement	1.3
(1) Indicating whether the necessary approval from each agency has been obtained, with a copy of each approval or disapproval attached	1.3
(2) If necessary approval has not been obtained, the reason why	1.3
(3) Indicating whether any waiver or variance has been granted or requested with a copy of each attached	1.3
F. The information described under COMAR 20.79.04.01 for transmission lines	1.2.3 5.2.2 6.2.2
G. A general description of the generating station or generating station modification under COMAR 20.79.03.01, or the transmission line or the modification to an existing transmission line under COMAR 20.79.04.02 and .03	1.5 1.6 2.0
H. An implementation schedule for the project	1.4
I. The environmental information required under COMAR 20.79.03.02 for generating stations or COMAR 20.79.04.04 for transmission lines	3.0 4.0 5.0 6.0

Table 1.5-2 CPCN Filing Requirements Generating Stations

Title 20, Subtitle 79 Chapter 03 Details of Filing Requirements-Generating Stations	CPCN Technical Report Section
.01 Description of the Generation Station	
A. Location	2.0
B. Design features	2.2
C. Operational features, including the expected capacity factor	2.3
D. The schedule for engineering, construction, and operation	2.4
E. A statement of the reasons for the selection of the design and the site of the generating station, including linear facilities, or generating station modification	2.2, 2.3 (design) 2.5 (siting)
F. A description of the impact of the project on the economics of the State	2.6
G. A description of the impact of the project on the stability and reliability of the electric system, or, if the impact is not known at the time of application, an explanation of the steps undertaken by the applicant to determine the impact, including the expected date for submission of the impact description	2.7
H. To the extent feasible, the location and major design features of any required major electric system upgrade, including any associated transmission line, as a result of the project	2.8
.02 Environmental Information	
A. Purpose of regulation	
B. Environmental information	4.0 5.0 6.0
(1) General information	4.0 5.0 6.0
(a) A general description of the physical, biological, aesthetic, and cultural features, and conditions of the site and adjacent areas	4.1 through 4.9
(b) A summary of the environmental and socioeconomic effects of the construction and operation of the project, including a description of the unavoidable impact and recommended mitigation	5.0 (Construction) 6.0 (Operations)
(c) A copy of all studies of the environmental impact of the proposed project prepared by the applicant	Appendix A
(d) A statement of the ability to conform to applicable environmental standards	Application
(2) Effect on air quality	4.5 5.5 6.5
(a) Ability of the generating station to comply with: (i) Federal or State ambient air quality standards (ii) Federal or State emission standards (iii) Federal new source performance standards (iv) Federal emission standards for hazardous air pollutants (v) Prevention of significant deterioration and new source review provisions (vi) Any requirement to obtain emission offsets, allowances, and reduction credits	5.5 (Construction) 6.5 (Operations)
(b) Impact on prevention of significant deterioration areas and existing nonattainment areas	6.5.1.1 6.5.2

Title 20, Subtitle 79 Chapter 03 Details of Filing Requirements-Generating Stations	CPCN Technical Report Section
(c) Information and forms required by Department of the Environment regulations relating to permits to construct and operating permits under COMAR 26.11	Appendix C
(3) Effect on water quality and appropriation	5.4 (Construction) 6.4 (Operations)
(a) An analysis of the availability of surface water and ground water for the proposed generating station	5.4.1.2 6.4.2.5
(b) The identification of affected streams and aquifers	4.4 5.4.1.1
(c) The impact on other water users	5.4.2 6.4
(d) The mitigation and minimization techniques evaluated	5.4.1.6 6.4.4
(e) The information and forms required by Department of the Environment regulations relating to water use and appropriation under COMAR 26.17.06.07 and 26.17.07, if applicable	Appendix C
(4) Effect on State or private wetlands, including	5.6.3 (Construction) 6.6.3 (Operations)
(a) Public health and welfare	5.2.1.3
(b) Marine fisheries	5.6.2
(c) Shell fisheries	5.6.2
(d) Wildlife	5.6.2
(e) Protection of life and property from flood, hurricane, or other natural disaster	5.6.2
(f) The evaluation of mitigation and minimization techniques, including proposals related to replacement lands	5.6.2 6.6.2
(g) The information and forms required by Department of the Environment regulations relating to a license for use of State tidal wetlands or nontidal wetlands under COMAR 26.23 and 26.24	Appendix C
(5) Disposal of plant-generated wastes	5.9 (Construction) 6.9 (Operations)

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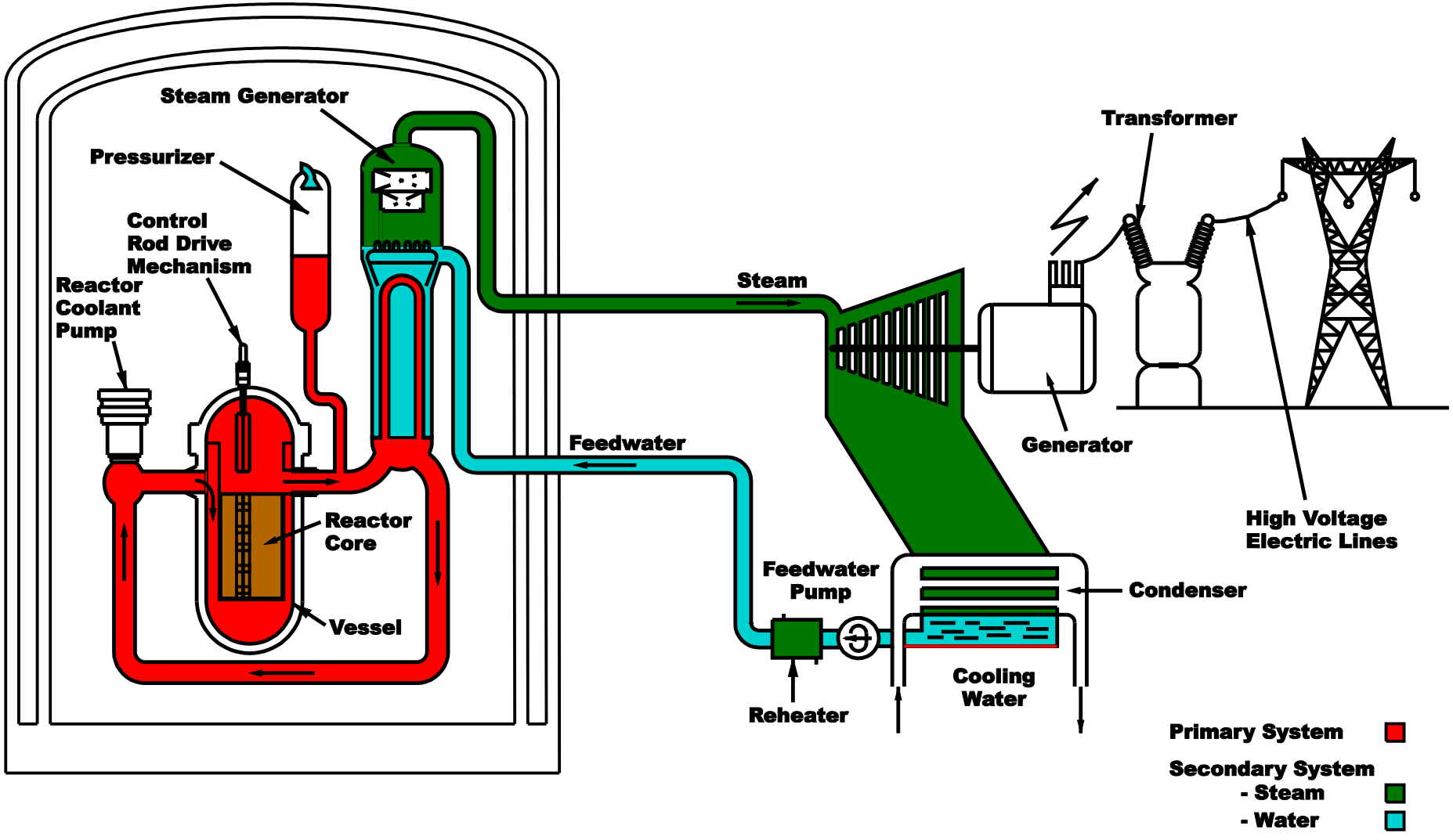

FIGURE 1.2-1 **Rev. 0**

REACTOR POWER CONVERSION SYSTEM

CCNPP UNIT 3 CPCN