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1.4 IDENTIFICATION OF AGENTS AND CONTRACTORS

1.4.1 Pennsylvania Power & Light Company (APPLICANT)

The Applicant has engaged the contractors noted below to perform engineering, procurement and construction services for the plant. However, irrespective of the contractual responsibilities discussed below, Pennsylvania Power & Light Co. is responsible for the design, construction and operation of the plant. A summary of previous experience in the field of power generation shows that the Applicant is technically qualified to engage in the proposed activities.

Pennsylvania Power & Light Co. has been involved in various nuclear projects for over 17 years. They include the following:

- a. A scoping design study of a pressurized water reactor plant (1954-1955)
- b. A scoping study of a homogeneous reactor power plant (1955)
- c. Participation in the Pennsylvania Advanced Reactor (PAR) project, including research and development of a 135 MWt homogeneous slurry reactor. This was a \$9 million project, shared equally by Pennsylvania Power & Light Co. and Westinghouse. Twenty-four Pennsylvania Power & Light Co. engineers and operators participated (1955-1959)
- d. Participation in the construction and pre-operational testing of the Homogeneous Reactor Experiment #2 at Oak Ridge (1955-1957)
- e. Participation with High Temperature Reactor Development Associates in construction and pre-operational testing of the 40 MWt Peach Bottom Gas Cooled Reactor (1963-1966)
- f. Participation in the HTGR Fuel and Fuel Cycle Development Program with other utilities and Gulf General Atomics (1964-1967).

In addition to the above activities various Pennsylvania Power & Light Co. personnel have attended Oak Ridge School of Reactor Technology and have been taking courses in Health Physics, Radiation Chemistry, Reactor Safety, Reactor Core Analysis, Water Cooled Reactor Technology, and Fuel Management.

In-house capability has included nuclear power plant bid evaluation and fuel management program development.

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Since 1970, PP&L has maintained Engineering, Project Management, Construction and Quality Assurance groups who are assigned full time to the design development and construction of the Susquehanna Steam Electric Station.

1.4.2 ARCHITECT ENGINEER

The Bechtel Power Corporation, San Francisco Power Division, has been awarded contracts for engineering, procurement and construction. Bechtel will perform engineering work related to the Balance of Plant (BOP) including the integration of NSSS systems and components. This work includes the preparation of mechanical, electrical, and civil/structural designs, plans and specifications.

Bechtel has been engaged in construction and engineering activities since 1898. Since the close of World War II, Bechtel has emphasized on electrical power generation projects. During this period, Bechtel has been responsible for the design and/or construction of over 237 thermal generating units, representing more than 118,000,000 kW of new generating capacity. Of this number, a nuclear capacity of more than 69,000,000 kW has been or is being engineered.

The ratings of thermal generating plants designed by Bechtel range up to 1,470,000 kW per unit and include most types of station designs and arrangements, such as reheat and non-reheat, indoor and outdoor stations, single and multiple units, and wide ranges of steam conditions up to 3500 psig, covered design, construction, startup, site surveys, license applications, feasibility studies, and equipment procurement.

1.4.3 NUCLEAR STEAM SUPPLY SYSTEM

The General Electric Company (GE) has been awarded the contracts to design, fabricate, and deliver the direct cycle boiling water nuclear steam supply system, to fabricate the first core of nuclear fuel, and to provide technical direction of installation, and startup of this equipment. GE has engaged in the development, design, construction and operation of boiling water reactors since 1955. Table 1.4-1 lists over 90 GE reactors completed, under construction, or on order. Thus, GE has substantial experience, knowledge, and capability to design, manufacture, and furnish technical assistance for the installation and startup of reactors.

1.4.4 TURBINE-GENERATOR VENDOR

General Electric Company designed, fabricated, and delivered the turbine-generator for the plant. GE also provides technical assistance for the installation and startup for this equipment.

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General Electric Company has a long history in the application of turbine-generators in nuclear power stations, dating back to the inception of nuclear facilities for the production of electrical power. GE also has extensive design, development, and installation experience on similar turbine-generator units used in non-nuclear power plants.

1.4.5 OTHER CONSULTANTS

Dames & Moore (D&M) Consultants have been responsible for the review and utilization of on-site meteorological data to perform short and long-term diffuser analysis which determine relative concentrations to the expected from normal plant operations. D&M have also performed geology and hydrology surveys of the Susquehanna SES site and vicinity for PP&L. D&M has performed similar services for other nuclear facilities.

Radiation Management Corporation (RMC) is a service organization which has performed the Appendix I dose calculations, performed the investigational phase of the radiological monitoring program, and will provide medical consulting services defined in the signed agreement letter contained in the Emergency Plan RMC has performed similar services for other nuclear facilities.

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TABLE 1.4-1

COMMERCIAL NUCLEAR REACTORS COMPLETED, UNDER CONSTRUCTION,
OR IN DESIGN BY GENERAL ELECTRIC

Station	Utility	Rating (MWe)	Year of Order	Year of Startup
Dresden 1	Commonwealth Edison	200	1955	1960
Humboldt Bay	Pacific G&E	69	1958	1963
Kahl	Germany	15	1958	1961
Gangliano	Italy	150	1959	1964
Big Rock Point	Consumers Power	70	1959	1963
JPDR	Japan	11	1960	1963
KRB	Germany	237	1962	1967
Tarapur 1	India	190	1962	1969
Tarapur 2	India	190	1962	1969
GKN	Holland	52	1963	1968
Oyster Creek	JCP&L	640	1963	1969
Nine Mile Point 1	Niagara Mohawk	625	1963	1970
Dresden 2	Commonwealth Edison	809	1965	1970
Pilgrim	Boston Edison	664	1965	1972
Millstone 1	NUSCO	652	1965	1971
Tsuruga	Japan	340	1965	1970
Nuclenor	Spain	440	1965	1971
Fukushima 1	Japan	439	1966	1971
BKW KKM	Switzerland	306	1966	1972
Dresden 3	Commonwealth Edison	809	1966	1971
Monticello	Northern States	545	1966	1971
Quad Cities 1	Commonwealth Edison	800	1966	1972
Browns Ferry 1	TVA	1098	1966	1973
Browns Ferry 2	TVA	1098	1966	1974
Quad Cities 2	Commonwealth Edison	800	1966	1972

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Station	Utility	Rating (MWe)	Year of Order	Year of Startup
Vermont Yankee	Vermont Yankee	514	1966	1972
Peach Bottom 2	Philadelphia Electric	1065	1966	1974
Peach Bottom 3	Philadelphia Electric	1065	1966	1974
Fitzpatrick	PASNY	821	1966	1975
Bailly	NIPSCO	660	1967	1977
Shoreham	LILCO	819	1967	1978
Cooper	Nebraska PPD	778	1967	1974
Browns Ferry 3	TVA	1098	1967	1975
Limerick 1	Philadelphia Electric	1098	1967	1981
Hatch 1	Georgia	786	1967	1975
Fukushima 2	Japan	762	1967	1974
Brunswick 1	Carolina P&L	821	1968	1976
Brunswick 2	Carolina P&L	821	1968	1975
Arnold	Iowa ELP	569	1968	1974
Fermi 2	Detroit Edison	1123	1968	1979
Limerick 2	Philadelphia Electric	1065	1969	1982
Hope Creek 1	PSE&G	1067	1969	1981
Hope Creek 2	PSE&G	1067	1969	1983
Zimmer 1	CCDPP	810	1969	1978
Chinshan	Taiwan	610	1969	1977
Caorso 1	Italy	827	1969	1975
Hatch 2	Georgia	795	1970	1978
La Salle 1	Commonwealth Edison	1078	1970	1978

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Station	Utility	Rating (MWe)	Year of Order	Year of Startup
La Salle 2	Commonwealth Edison	1078	1970	1979
Susquehanna 1	Pennsylvania P&L	1052*	1970	1980
Susquehanna 2	Pennsylvania P&L	1052*	1970	1982
Chinshan 2	Taiwan	610	1970	1978
WPPSS 2	WPPSS	1103	1971	1977
Nine Mile Point 2	Niagara Mohawk	1080	1971	1979
Grand Gulf 1	Midsouth	1290	1971	1979
Grand Gulf 2	Midsouth	1290	1971	1981
Kaiseraugst	Switzerland	915	1971	1978
Fukushima 6	Japan	1135	1971	1976
Tokai 2	Japan	1135	1971	1976
Riverbend 1	Gulf States	934	1972	1980
Riverbend 2	Gulf States	934	1972	1981
Perry 1	Cleveland Electric	1205	1972	1979
Perry 2	Cleveland Electric	1205	1972	1980
Barton 1	Alabama	1100	1972	1983
Barton 2	Alabama	1100	1972	1984
Douglas Point 1	PEPCO	1178	1972	1985
Douglas Point 2	PEPCO	1178	1972	1987
Somerset 1	New York State E&G	1220	1972	1982
Somerset 2	New York State E&G	1200	1972	1984
Hartsville 1	TVA	1228	1972	1980
Hartsville 2	TVA	1228	1972	1981

* Upgraded to 1100 MWe (NET) in 1994.

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OR IN DESIGN BY GENERAL ELECTRIC

Station	Utility	Rating (MWe)	Year of Order	Year of Startup
Hartsville 3	TVA	1228	1972	1981
Hartsville 4	TVA	1228	1972	1982
Laguna Verde 1	Mexico	660	1972	1977
Leibstadt	Switzerland	940	1972	1978
Kuosheng 1	Taiwan	992	1972	1978
Kuosheng 2	Taiwan	992	1972	1979
Clinton 1	Illinois Power	955	1973	1981
Clinton 2	Illinois Power	955	1973	1984
Montague 1	NUSCO	1220	1973	1982
Allens Creek 1	Houston L&P	1150	1973	1980
Allens Creek 2	Houston L&P	1150	1973	1982
Skagit 1	Puget SD	1290	1973	1981
Skagit 2	Puget SD	1290	1973	1983
Barton 3	Alabama	1220	1973	1985
Barton 4	Alabama	1220	1973	1986
Blackfox 1	Oklahoma	950	1973	1983
Blackfox 2	Oklahoma	950	1973	1985
Zimmer 2	CDPP	1220	1973	1984
Confrentes	Spain	975	1973	1977
Laguna Verde 2	Mexico	660	1973	1978
Enel 6	Italy	982	1974	1980
Enel 8	Italy	982	1974	1980

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