BESICORP - EMPIRE POWER COMPANY, LLC
ARTICLE VII APPLICATION

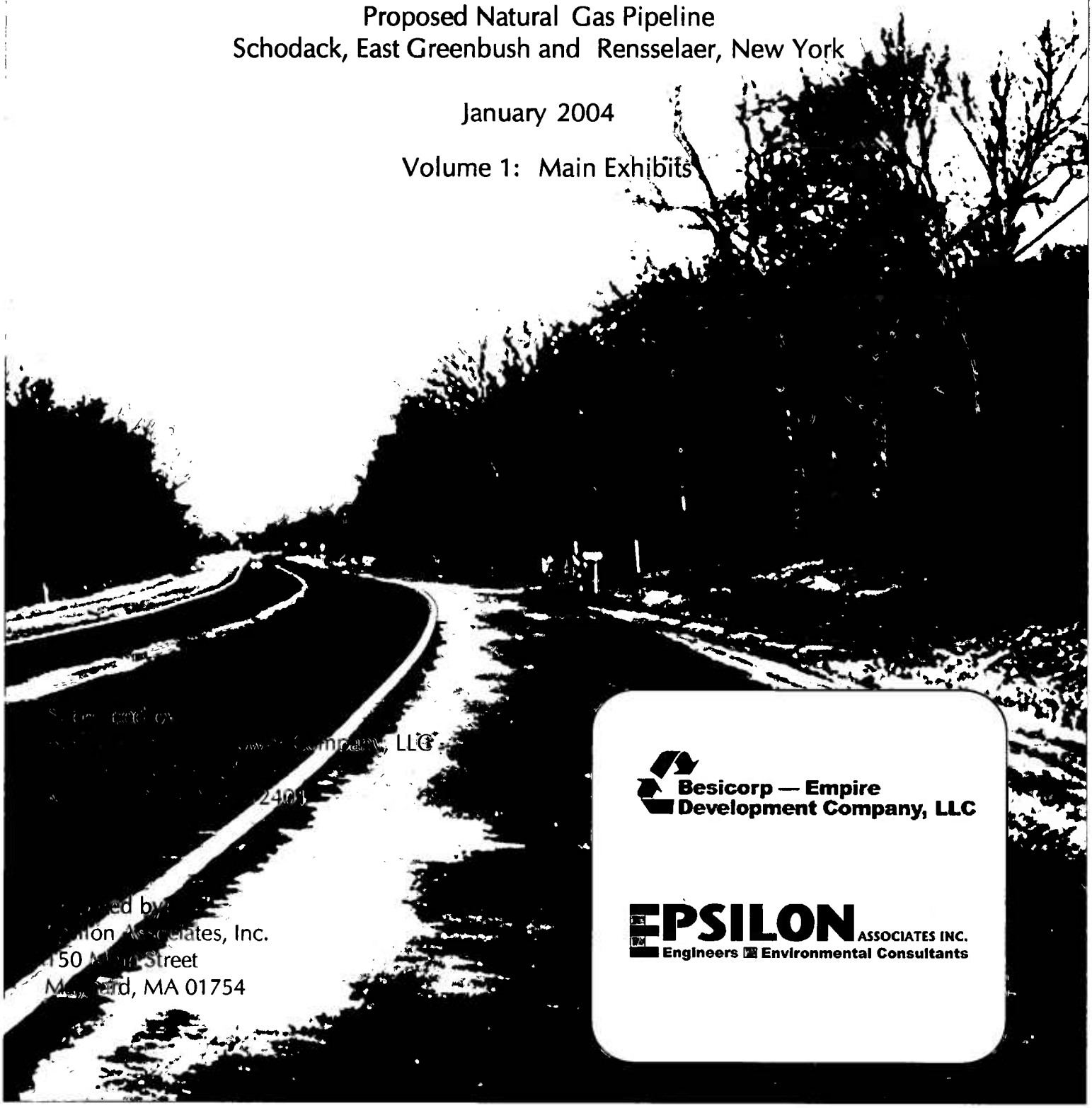
UNDER

New York State Public Service Law
Article VII, Section 121-a,
Title 16 N.Y.C.R.R. Part 85-1.3

Proposed Natural Gas Pipeline
Schodack, East Greenbush and Rensselaer, New York

January 2004

Volume 1: Main Exhibits



Besicorp — Empire Development Company, LLC

EPSILON ASSOCIATES INC.
Engineers ■ Environmental Consultants

Prepared by:
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BOND, SCHOENECK & KING, PLLC
ATTORNEYS AT LAW ▪ NEW YORK FLORIDA KANSAS

January 30, 2004

Honorable Jaclyn A. Brilling
Secretary
New York State Department
of Public Service
Three Empire State Plaza, 20th Floor
Albany, New York 12223-1350

Re: Application of Besicorp-Empire Power Company, LLC Pursuant to Article VII of the Public Service Law for a Certificate of Environmental Compatibility and Public Need for the Empire State Newsprint Project Natural Gas Transmission Line Facility of Less than 10 Miles and Associated Equipment through the City of Rensselaer and Towns of East Greenbush and Schodack

Dear Secretary Brilling:

Besicorp-Empire Power Company, LLC ("PowerCo"), in accordance with 16 New York Code of Rules and Regulations ("N.Y.C.R.R.") § 85-1.3(b), hereby transmits and serves an original and four (4) copies of its application for a Certificate of Environmental Compatibility and Public Need ("Application"). This Application is being filed pursuant to Article VII of the Public Service Law of the State of New York (§§ 121, 121-a(3) and 122) and the implementing regulations of the New York State Public Service Commission ("NYSPSC") (16 N.Y.C.R.R. Subpart 85-1.3) authorizing the construction, operation and maintenance of approximately 4.5 miles of 16-inch natural gas transmission facilities (the "Proposed Natural Gas Pipeline") and associated equipment from the site of its interconnection with Tennessee Gas Pipeline Company's ("TGP's") pipeline No. 200, near the intersection of Route 9J, in the Town of Schodack, Rensselaer County, New York for transporting natural gas to the Besicorp-Empire Development Company, LLC ("BEDCO") proposed cogeneration power plant ("BEDCO Power Plant") in the City of Rensselaer, Rensselaer County, New York.

Pursuant to Section 130 of the Public Service Law and Section 401 of the Federal Water Pollution Control Act, (33 U.S.C.A. § 1341 (2001)), NYSPSC issuance of a requisite water quality certificate is requested for the Proposed Natural Gas Pipeline.

Pursuant to Section 126(1)(f) of the Public Service Law, NYSPSC waiver of local zoning and land use regulations are sought, as more specifically detailed in Exhibit 7 of the Application.

PowerCo proposes to construct, operate and maintain the Proposed Natural Gas Pipeline from the site of its interconnection with TGP's No. 200 pipeline in the Town of Schodack to the proposed BEDCO Power Plant (a nominal 505-Megawatt cogeneration plant) in the City of Rensselaer, Rensselaer County, New York.

The Proposed Natural Gas Pipeline will start from a hot tap on TGP's No. 200 natural gas pipeline, pass through a new Gate Station and proceed north along the existing New York State Department of Transportation Route 9J right-of-way ("ROW") for approximately 3.9 miles. The Proposed Natural Gas Pipeline will follow this ROW to a point approximately 330 feet south of the limit of the City of Rensselaer. At this point the Proposed Natural Gas Pipeline will head westerly under Route 9J and the CSX railroad ROW and a strip of Albany Port District Commission property (via newly acquired ROW). The Proposed Natural Gas Pipeline will then proceed in a northerly direction across the eastern edges of private properties (via newly acquired ROW) to a point at which it will enter the southern corner of the BEDCO Power Plant site. The Proposed Natural Gas Pipeline will then proceed westerly across an old rail spur on the southern edge of the site, cross the Port Access Highway near its intersection with Riverside Avenue and enter and follow the electric ROW for the BEDCO Power Plant. The Proposed Natural Gas Pipeline will terminate at a new gas large meter station in the central portion of the BEDCO Power Plant site.

Service of this Application has been made on the Statutory Party Service List. Attached to this transmittal letter are: (1) an affidavit, prepared pursuant to Public Service Law Section 121-a(3); (2) the Statutory Party Service List (Public Service Law § 122(2) and 16 N.Y.C.R.R. §85-1.3(b)), showing that a copy of the Application was, or will contemporaneously be sent to all the statutory parties required to be served; and (3) a Notice of Proposed Agency Action.

Kindly advise the undersigned of Administrative Law Judge and Department of Public Service Staff assignments to this docket.

Questions with regard to this filing, either by the Staff of the Department of Public Service or any of the individuals required to be served with the Application, should be directed to the undersigned. Thank you for your attention, assistance and consideration.

Respectfully submitted,

BOND, SCHOENECK & KING, PLLC

By _____

Robert Tyson, Esq.
Kevin Bernstein, Esq.
One Lincoln Center
Syracuse, New York 13202
Telephone: (315) 218-8221
Fax: (315) 218-8100

On behalf of:

Besicorp-Empire Power Company, LLC
1151 Flatbush Road
Kingston, New York 12401

Dated: January 30, 2004

cc: Statutory Party Service List

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Besicorp-Empire Power Company, LLC For a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of The Public Service Law	)	CASE 04-

AFFIDAVIT OF SERVICE

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

Robert Tyson, being duly sworn, on oath deposes and says: that on or about the 30th day of January, 2004, a true and complete copy (or copies as required) of the Article VII Application of Besicorp-Empire Power Company, LLC ("PowerCo") for a Certificate of Environmental Compatibility and Public Need ("Application") to construct, operate and maintain a natural gas transmission facility of less than 10 miles (the "Proposed Natural Gas Pipeline"), from its interconnection point with Tennessee Gas Pipeline Company's No. 200 transmission pipeline near the intersection of New York State Route 9J in the Town of Schodack, Rensselaer County, New York, to a gas large meter station on the site of the Besicorp-Empire Development Company, LLC ("BEDCO") cogeneration power plant ("BEDCO Power Plant") in the City of Rensselaer, Rensselaer County, New York, has been served upon each party or person listed on the attached Service List by hand delivery, overnight courier, or express U.S. mail delivery.

PowerCo has arranged for the publication of a public notice announcing the filing of the Application in the following newspapers: Times Union, The Troy Record, and The Advertiser, Rensselaer County edition. Proof of publication will be provided when it is received.

Date: January 30, 2004

BOND, SCHOENECK & KING, PLLC

Robert Tyson, Esq.
Kevin Bernstein, Esq.
One Lincoln Center
Syracuse, New York 13202
Telephone: (315) 218-8221
Fax: (315) 218-8100

Sworn to before me this

30th day of January, 2004

Notary Public

KIMBERLEE S. PARKER
Notary Public, State of New York
Qualified in Saratoga Co. No. 02PA5060676
Commission Expires May 20, 2006

BESICORP-EMPIRE POWER COMPANY, LLC
ARTICLE VII APPLICATION TO THE
PUBLIC SERVICE COMMISSION
16-INCH PROPOSED NATURAL GAS PIPELINE
STATUTORY SERVICE LIST
(N.Y. PUBLIC SERVICE LAW § 121-a(3); 16 N.Y.C.R.R. § 85-1.3)

Municipalities:
(NY Public Service Law §121-a(3))

FOR CITY OF RENSSELAER:

HON. MARK G. PRATT, MAYOR
City Hall
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Rensselaer, NY 12144
Phone: 518-462-9511
Fax: 518-462-9895
E-Mail: mayorpratt@yahoo.com

MICHAEL J. MOORE, ESQ.
Young, Sommer, Ward, Ritzenberg, Wooley,
Baker & Moore, LLC
Executive Woods
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Albany, NY 12205
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Fax: 518-438-9914
E-Mail: mmoore@youngsommer.com

FOR TOWN OF EAST GREENBUSH:

HON. ROBERT ANGELLINI
Supervisor
Town of East Greenbush
225 Columbia Turnpike
Rensselaer, NY 12144

FOR TOWN OF SCHODACK:

HON. EILEEN NATOLI
Supervisor
1777 Columbia Turnpike
Castleton, NY 12033

Statutory New York State Agencies:
(NY Public Service Law §121-a(3))

FOR NYS PUBLIC SERVICE COMMISSION:

MR. PETER SEIDMAN
New York State Department
of Public Service
Office of Electricity & Environment
Three Empire State Plaza
Albany, NY 12223-1350

MR. ANDREW DAVIS
New York State Department
of Public Service
Environmental Compliance and Operations Section
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PAUL AGRESTA, ESQ.
New York State Department
of Public Service
Office of General Counsel
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Fax: 518-473-7081
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FOR NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

HON. ERIN M. CROTTY
Commissioner
New York State Department
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625 Broadway
Albany, NY 12233-1500

HON. STEVEN SCHASSLER
Regional Director, Region 4
New York State Department of
Environmental Conservation
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MARK SANZA, ESQ.
New York State Department of
Environmental Conservation
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Fax: 518-402-9018
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FOR NYS DEPARTMENT OF AGRICULTURE & MARKETS:

HON. NATHAN L. RUDGERS
Commissioner
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MR. MATTHEW J. BROWER
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E-Mail: matthew.brower@agmkt.state.ny.us

Other NYS & Municipal Agencies
(16 NYCRR § 85-1.3)

FOR COMMISSIONER OF TRANSPORTATION:

JOSEPH H. BOARDMAN
Commissioner
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5-504 Harriman State Office Campus
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Albany, NY 12232

THOMAS C. WERNER
Regional Director
New York State Department of Transportation
Region 1
328 State Street
Schenectady, NY 12305

FOR NYS DEPARTMENT OF ECONOMIC DEVELOPMENT:

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FOR NYS OFFICE OF PARKS RECREATION & HISTORIC PRESERVATION:

HON. BERNADETTE CASTRO
Commissioner
New York State Office of Parks, Recreation & Historic Preservation
Agency Building 1
Empire State Plaza
Albany, NY 12238

DR. ROBERT KUHN
State Archeologist for Government and Public Policy
New York State Office of Parks, Recreation & Historic Preservation
Peebles Island
Waterford, NY 12188

HON. DOMINIC JACKANGELO
Deputy Commissioner
New York State Office of Parks, Recreation & Historic Preservation
Agency Building 1
Empire State Plaza
Albany, NY 12238

FOR NYS SECRETARY OF STATE:

HON. RANDY A. DANIELS
Secretary of State
New York State Department of State
41 State Street
Albany, NY 12231-0001

MS. DIANA BOOS
New York State Department of State
Division of Coastal Resources
42 State Street
Albany, NY 12231

FOR RENSSELAER COUNTY:

HON. KATHLEEN M. JIMINO
Rensselaer County Executive
1600 Seventh Avenue
Troy, NY 12180

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

NOTICE OF PROPOSED AGENCY ACTION

Re: Application of Besicorp-Empire Power Company, LLC ("PowerCo") Pursuant to Article VII of the Public Service Law for a Certificate of Environmental Compatibility and Public Need for the Empire State Newsprint Project Natural Gas Transmission Line Facility of Less than 10 Miles and Associated Equipment through the City of Rensselaer and Towns of East Greenbush and Schodack, Rensselaer County, New York

PURSUANT to the provisions of the State Administrative Procedure Act, NOTICE is hereby given of the following proposed action:

PROPOSED ACTION:

The New York State Public Service Commission ("NYSPSC") is considering whether to approve an Application pursuant to Public Service Law §§ 121-a(3), 122 and 126. The Application was filed by PowerCo and seeks permission to construct, operate and maintain a new 16-inch diameter natural gas transmission pipeline ("Proposed Natural Gas Pipeline") and associated equipment to connect the Tennessee Gas Pipeline Company's ("TGP's") No. 200 transmission pipeline, near its intersection with Route 9J in the Town of Schodack, Rensselaer County, New York, to the proposed Besicorp-Empire Development Company, LLC ("BEDCO") cogeneration power plant ("BEDCO Power Plant") in the City of Rensselaer, Rensselaer County, New York. The Proposed Natural Gas Pipeline would be approximately 4.5 miles in length and would be placed primarily in existing New York State Department of Transportation rights-of-way ("ROWs"). The Proposed Natural Gas Pipeline would transport natural gas to the BEDCO

Power Plant from the TGP No. 200 high-pressure natural gas transmission pipeline and would traverse the Towns of Schodack and East Greenbush and the City of Rensselaer, all within Rensselaer County.

STATUTORY AUTHORITY:

Public Service Law §§ 121-a(3), 122 and 126.

SUBJECT:

Grant of permission, pursuant to Article VII of the Public Service Law, for PowerCo's construction of a 16-inch diameter natural gas transmission pipeline and associated equipment.

PURPOSE:

To approve, under Public Service Law §§ 121-a(3), 122 and 126, the certification of PowerCo's natural gas transmission pipeline from the TGP No. 200 pipeline to the BEDCO Power Plant.

SUBSTANCE OF PROPOSED ACTION:

The proposed NYSPSC action would be to grant, grant on condition or deny the requested authority under Article VII of the Public Service Law.

TEXT OF PROPOSED ACTION MAY BE OBTAINED FROM:

The express terms of the Application may be obtained from the Hon. Jaclyn A. Brilling, Secretary, Public Service Commission of the State of New York, Three Empire State Plaza, Albany, New York 12223, (518) 474-6530.

DATA, VIEWS OR ARGUMENTS MAY BE SUBMITTED TO:

Hon. Jaclyn A. Brilling, Secretary, Public Service Commission of the State of New York, Three Empire State Plaza, Albany, New York 12223, (518) 474-6530.

Respectfully submitted,

BOND, SCHOENECK & KING, PLLC

By: _____

Robert Tyson, Esq.
Kevin Bernstein, Esq.
One Lincoln Center
Syracuse, New York 13202
Telephone: (315) 218-8221
Fax: (315) 218-8100

On behalf of:

Besicorp-Empire Power Company, LLC
1151 Flatbush Road
Kingston, New York 12401

January 30, 2004

BESICORP-EMPIRE POWER COMPANY, LLC

ARTICLE VII APPLICATION
Proposed Natural Gas Pipeline

Town of Schodack, Town of East Greenbush and City of Rensselaer, Rensselaer County, New York

January 2004

UNDER
New York State Public Service Law
Article VII Section 121-a,
Title 16 N.Y.C.R.R Part 85-1.3

Submitted by:

Besicorp-Empire Power Company, LLC
1151 Flatbush Road
Kingston, New York 12401

Prepared by:

Epsilon Associates, Inc.
150 Main Street
Maynard, MA 01754

BESICORP-EMPIRE POWER COMPANY, LLC
ARTICLE VII APPLICATION FOR PROPOSED NATURAL GAS PIPELINE

TABLE OF CONTENTS

		Page
VOLUME 1		
MATTER OF THE APPLICATION		
TERMS, ACRONYMS AND ABBREVIATIONS		
EXHIBIT 1	GENERAL INFORMATION REGARDING APPLICATION	1-1
EXHIBIT 2	LOCATION OF FACILITIES	2-1
EXHIBIT 3	DEMONSTRATION OF NEED	3-1
EXHIBIT 4	ENVIRONMENTAL ASSESSMENT	4-1
EXHIBIT 5	DESIGN INFORMATION	5-1
EXHIBIT 6	OTHER PENDING FILINGS	6-1
EXHIBIT 7	LIST OF APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS	7-1
EXHIBIT 8	ADDITIONAL INFORMATION RELEVANT TO THIS APPLICATION	8-1
EXHIBIT 9	APPLICATION CROSS REFERENCE	9-1
EXHIBIT 10	ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION STANDARDS AND PRACTICES CHECKLIST	10-1
EXHIBIT 11	ALTERNATIVES ANALYSIS	11-1

TABLE OF CONTENTS (CONTINUED)

Page

VOLUME 2

EXHIBIT __ (RPR-1) CORRESPONDENCE RPR001

EXHIBIT __ (JIK-1) CULTURAL RESOURCES JIK001

AERIAL PHOTOS

ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION STANDARDS AND PRACTICES

LIST OF FIGURES

Figure 2-1 Proposed Natural Gas Pipeline – NYSDOT Base Map

Figure 2-2 Proposed Natural Gas Pipeline – Orthophoto Base Map

Figure 2-3 Proposed Natural Gas Pipeline – Route Photographs

Figure 2-4 Location of Facilities – Existing Natural Gas Pipelines

Figure 2-5 Location of Other Underground Facilities (within Study Corridor)

Figure 2-6 Location of Overhead Electric Facilities (within Study Corridor)

Figure 2-7 Conceptual Drawing – Proposed Natural Gas Pipeline Northern End to GLM Station

Figure 4-1 Hydrology

Figure 4-2 Land Categories

Figure 4-3 Soils

Figure 4-4 Surficial Geology

Figure 4-5 Stream Crossings

Figure 4-6 Wetlands – Orthophoto Base Map

Figure 4-7 Soil Limitations

Figure 5-1 Typical TGP Interconnection Drawing – New Gate Station

Figure 5-2 Proposed GLM Design

Figure 5-3 Typical Valve Site Design

Figure 5-4 Proposed 16" Natural Gas Pipeline Rte 9J & CSX Rail Crossing

Figure 5-5 Proposed 16" Natural Gas Pipeline Port Access Highway Crossing

Figure 7-1 Zoning

LIST OF TABLES

		Page
Table 2.3-1	Approximate Distances by Municipality	2-9
Table 4.5-1	Linear Miles by Land Use / Cover Type Category	4-35
Table 4.5-2	Acreage by Land Use / Cover Type Category	4-36
Table 4.5-3	Estimated Clearing of Forest	4-37
Table 4.5-4	Acreage Affected by Aboveground Facilities	4-37
Table 4.5-5	Consistency with Local and State Coastal Zone Management Policies	4-41
Table 4.7-1	Stream Crossings	4-54
Table 4.7-2	Upland Vegetation Communities and Representative Plant Species	4-66
Table 4.7-3	Potential Wildlife Species within each Community Type	4-68
Table 4.7-4	Summary of Wetland Features Along the Proposed Natural Gas Pipeline Wetland Study Corridor	4-79
Table 4.7-5	Wetland Functions and Values (Summary)	4-90
Table 4.7-6	Wetland Functions and Values	4-91
Table 4.8-1	Facility Site Soils and General Characteristics	4-97

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Besicorp-Empire Power Company, LLC For a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of The Public Service Law	CASE 04-

MATTER OF THE ARTICLE VII APPLICATION

Besicorp-Empire Power Company, LLC ("PowerCo"), pursuant to Article VII of the Public Service Law of the State of New York (§§ 121, 121-a(3) and 122) and the implementing regulations of the New York State Public Service Commission ("NYSPSC") (16 N.Y.C.R.R. Subpart 85-1.3), makes application for a Certificate of Environmental Compatibility and Public Need ("Application") authorizing the construction, operation and maintenance of the proposed 4.5-mile, 16-inch diameter natural gas transmission pipeline ("Proposed Natural Gas Pipeline" or "Facility") and associated equipment from an interconnection with Tennessee Gas Pipeline Company's ("TGP's") 24-inch, No. 200 high-pressure natural gas transmission line in the Town of Schodack, New York, to the Besicorp-Empire Development Company, LLC ("BEDCO") proposed cogeneration power plant ("BEDCO Power Plant") site in the City of Rensselaer, New York. PowerCo will also construct a new gate station in the Town of Schodack, a few hundred feet north of the interconnection point with the TGP No. 200 natural gas transmission line.

Pursuant to Section 130 of the Public Service Law (N.Y. Public Service Law § 130 (McKinney 2000)) and Section 401 of the Federal Water Pollution Control Act (33 U.S.C.A. § 1341 (2001)), NYSPSC issuance of a requisite water quality certificate for the Proposed Natural Gas Pipeline is requested.

Pursuant to Section 126(1)(f) of the Public Service Law, NYSPSC waiver of local zoning and land use regulations is sought, as more specifically detailed in Exhibit 7 (N.Y. Public Service Law § 126(1)(f) (McKinney 2000)).

The Application herein described, respectfully shows:

I. General Information Regarding the Application

This Application is made pursuant to Article VII of the Public Service Law of the State of New York (N.Y. Public Service Law §§ 121, 121-a(3), and 122) and Subpart 85-1.3 of Title 16 of the Rules and Regulations of the NYSPSC (16 N.Y.C.R.R. Subpart 85-1.3).

Exhibit 1, attached hereto and made a part hereof, sets forth the corporate name, address and telephone number of PowerCo; the name, address and telephone number of its principal officer; and the names, addresses and telephone numbers of the agents for service of documents.

II. Description of the Proposed Natural Gas Transmission Pipeline

PowerCo proposes to construct, operate and maintain the Proposed Natural Gas Pipeline to transport the natural gas fuel supply from the site of its interconnection with TGP's No. 200 pipeline in the Town of Schodack, Rensselaer County, New York to the gas large meter ("GLM") station on the site of the 505 megawatt ("MW") BEDCO Power Plant that is proposed to be constructed in the City of Rensselaer, Rensselaer County, New York. The Proposed Natural Gas Pipeline will be approximately 4.5 miles in length and will be 16-inches in diameter. Of the total 4.5 miles, approximately 3.9 miles of the route for the Facility consists of existing New York State Department of Transportation rights-of-way ("ROW") along the Route 9J corridor in the Town of Schodack and the Town of East Greenbush, Rensselaer County, New York.

III. Statement of Location of the Proposed Right-of-Way

The Proposed Natural Gas Pipeline will start from a hot tap on TGP's No. 200 natural gas pipeline, pass through a new Gate Station and proceed north within the eastern bounds of the existing New York State Department of Transportation Route 9J ROW for approximately 3.9 miles. The Proposed Natural Gas Pipeline will follow this ROW to a point approximately 330 feet south of the limit of the City of Rensselaer. At this point the Proposed Natural Gas Pipeline will head westerly under Route 9J and the CSX railroad ROW and a strip of Albany Port District Commission property. The Proposed Natural Gas Pipeline will then proceed in a northerly direction across the eastern edges of private properties (via newly acquired ROW) to a point at which it will enter the southern corner of the BEDCO Power Plant site. The Proposed Natural Gas Pipeline will then proceed westerly across an old rail spur on the southern edge of the site, cross the Port Access Highway near its intersection with Riverside Avenue and enter and follow the electric ROW for the BEDCO Power Plant. The Proposed Natural Gas Pipeline will terminate at a new GLM station in the central portion of the BEDCO Power Plant site.

Detailed maps, drawings and explanations showing the proposed ROW location and configurations are set forth in exhibits to this Application.

IV. Summary and Description of Studies Made of the Environmental Impact of the Proposed Project

Epsilon Associates, Inc., a consultant hired by BEDCO, prepared the environmental assessment for the Proposed Natural Gas Pipeline, with the exception of the cultural resources survey, which was prepared by John Milner Associates. The findings of these studies are presented in Exhibit 4 of this Application. In general, it was determined that the proposed route will not have significant impacts on the environment.

V. Need for the Transmission Facility

The proposed Proposed Natural Gas Pipeline is required to transport the natural gas fuel supply from TGP's No. 200 pipeline to the proposed BEDCO Power Plant. Currently, no natural gas transmission pipeline serves the BEDCO Power Plant site, and existing gas facilities in the vicinity are insufficient to supply the natural gas demand of the BEDCO Power Plant. The proposed in-service date of the Proposed Natural Gas Pipeline is 2005. Demonstration of this need is presented in Exhibit 3 of this Application.

VI. Conclusion

WHEREFORE, for the foregoing reasons, PowerCo respectfully requests that the NYSPSC issue an order pursuant to Article VII of the Public Service Law granting:

1. A Certificate of Environmental Compatibility and Public Need for the 16-inch Proposed Natural Gas Pipeline to connect the TGP No. 200 pipeline to the BEDCO Power Plant herein described;
2. A 401 Water Quality Certificate pursuant to 33 U.S.C.A. Section 1341 and Section 130 of the Public Service Law;
3. A waiver of those local zoning ordinances and laws specified in Exhibit 7 of the Application, pursuant to Section 126(1)(f) of the Public Service Law and 16 N.Y.C.R.R. § 85-1.2(c)(2); and
4. Such other further authorities, consents, permissions and approvals as may be necessary for the construction, operation and maintenance of the natural gas transmission facilities herein proposed.

BOND, SCHOENECK & KING, PLLC

By:_____

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Kevin Bernstein, Esq.
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Telephone: (315) 218-8221
Fax: (315) 218-8100

On Behalf Of:
Besicorp-Empire Power Company, LLC
1151 Flatbush Road
Kingston, New York 12401

Dated: January 30, 2004

TERMS, ACRONYMS AND ABBREVIATIONS

The following Terms, Acronyms and Abbreviations are provided for reference purposes. Not all Terms, Acronyms and Abbreviations in the following list can be found in each Exhibit, but all are used within the document.

a.c.	alternating current
API	American Petroleum Institute
Applicant	Besicorp-Empire Power Company, LLC
Application	Application of Besicorp-Empire Power Company, LLC for a Certificate of Environmental Compatibility and Public Need pursuant to Article VII of the Public Service Law of the State of New York for its Proposed Natural Gas Pipeline
Article X Application	Application for proposed BEDCO Power Plant and RNMP under review by the NYSPSC (Case No. 00-F-2057).
BASF	BASF Corporation
BEDCO	Besicorp - Empire Development Company, LLC
BEDCO Power Plant	505-megawatt (nominal) combined-cycle cogeneration power plant proposed in conjunction with a recycled newsprint manufacturing plant (Article X Case No. 00-F-2057).
BEDCO Projects	BEDCO Power Plant and RNMP proposed in Article X Application (Case No. 00-F-2057) and NYSDEC SEQRA proceeding (Project No. 4-3814-00052); integral components are an electrical delivery connection (Proposed Transmission Line) and a fuel supply connection (Proposed Natural Gas Pipeline).
CCR	Code of the City of Rensselaer
County SWCS	Rensselaer County Soil and Water Conservation Service
CZM	New York State Coastal Zone Management
dth	Dekatherm
DTI	Dominion Transmission Inc.
EA	Environmental Assessment
EIS	Environmental Impact Statement
EM&CS&P	Environmental Management and Construction Standards and Practices
Facility	The Proposed Natural Gas Pipeline and associated equipment to supply fuel to the BEDCO Power Plant
FFA	Floodflow Alteration, Storage & Desynchronization

TERMS, ACRONYMS AND ABBREVIATIONS (CONTINUED)

GLM station	Gas large meter station
GPS	Global Positioning System
GW	Groundwater
HM	Highway Methodology
IS	Intermittent stream
JMA	John Milner Associates
kV	Kilovolt
LWRP	Local waterfront revitalization program
MAOP	Maximum allowable operating pressure
MMcf	Million cubic feet
MW	Megawatt
NGVD	National Geodetic Vertical Datum of 1929
NMPC	Niagara Mohawk Power Corporation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRRT	Nutrient Removal / Retention / Transformation
NWI	National Wetlands Inventory
NYCRR	New York Code of Rules and Regulations
NYSDAM	New York State Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSNHP	New York State Natural Heritage Program
NYSPSC	New York State Public Service Commission
O&M	Operation and Maintenance

TERMS, ACRONYMS AND ABBREVIATIONS (CONTINUED)

Papscanee	Papscanee Marsh and Creek / Papscanee Island Nature Preserve
PE	Production Export – Nutrient
ppt	Parts per thousand
PowerCo	Besicorp-Empire Power Company, LLC
Preferred route	The route of the Proposed Natural Gas Pipeline commencing at TGP's No. 200 pipeline and traveling northward along the eastern edge of Route 9J, crossing under Route 9J, the CSX rail line and a strip of land owned by the Albany Port District Commission, approximately 330 feet south of the City of Rensselaer / Town of East Greenbush municipal boundary, then traversing northward along new ROW across four industrial properties and entering the BEDCO property, terminating at a new GLM station.
Projects	The Empire State Newsprint Projects, a recycled newsprint manufacturing plant proposed by BEDCO in conjunction with the BEDCO Power Plant, the Proposed Transmission Line and the Proposed Natural Gas Pipeline.
Proposed Natural Gas Pipeline	The proposed natural gas pipeline to supply fuel to the BEDCO Power Plant
Proposed Transmission Line	Proposed 345-kV transmission line interconnection between the BEDCO Power Plant and the NMPC Reynolds Road substation
PS	Perennial stream
psig	Pounds per square inch gauge
R / D	Recharge / Discharge
RNMP	Recycled Newsprint Manufacturing Plant (Project No. 4-3814-00052) proposed in the joint SEQRA / Article X proceeding in conjunction with the BEDCO Power Plant (Case No. 00-F-2057).
ROW	right-of-way
ROWs	rights-of-way
SCADA	Supervisory Control and Data Acquisition
SCS	Soil Conservation Service
SEQRA	State Environmental Quality Review Act
SF	Square Feet
SPCC	Spill Prevention Control and Countermeasure
SPDES	State Pollutant Discharge Elimination System
SSS	Sediment / Shoreline / Stabilization
STPR	Sediment / Toxicant / Pathogen Retention
SWCS	Rensselaer County Soil and Water Conservation Service
SWPPP	Storm Water Pollution Prevention Plan
tcf	trillion cubic feet
TGP	Tennessee Gas Pipeline Company

TERMS, ACRONYMS AND ABBREVIATIONS (CONTINUED)

USACOE	United States Army Corps of Engineers
USACOE Manual	1987 Corps of Engineers Wetland Delineation Manual
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WH	Wildlife Habitat

EXHIBIT 1

GENERAL INFORMATION REGARDING APPLICATION

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

EXHIBIT 1 – GENERAL INFORMATION REGARDING APPLICATION

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Exhibit 1

Exhibit 2

EXHIBIT 2

LOCATION OF FACILITIES

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, Rensselaer County, New York
Town of East Greenbush, Rensselaer County, New York
City of Rensselaer, Rensselaer County, New York

TABLE OF CONTENTS

EXHIBIT 2 – LOCATION OF FACILITIES **2-1**

2.1 Introduction 2-1
2.2 Facility Maps 2-2
2.3 Facility Overview 2-4
2.3.1 Proposed Natural Gas Pipeline route analysis 2-5
2.3.2 Town of Schodack 2-9
2.3.3 Town of East Greenbush 2-10
2.3.4 City of Rensselaer 2-12
2.4 Right-of-Way Details 2-13
2.4.1 Existing Right-of-Way 2-13
2.4.2 New Right-of-Way Acquisition 2-13
2.4.3 Temporary Right-of-Way for Construction 2-15
2.4.4 Right-of-Way Clearing 2-15
2.4.5 Access and Maintenance Routes 2-16

LIST OF FIGURES

Figure 2-1 Proposed Natural Gas Pipeline – NYSDOT Base Map

Figure 2-2 Proposed Natural Gas Pipeline – Orthophoto Base Map

Figure 2-3 Proposed Natural Gas Pipeline – Route Photographs

Figure 2-4 Location of Facilities – Existing Natural Gas Pipelines

Figure 2-5 Location of Other Underground Facilities (within Study Corridor)

Figure 2-6 Location of Overhead Electric Facilities (within Study Corridor)

Figure 2-7 Conceptual Drawing – Proposed Natural Gas Pipeline Northern End to GLM Station

LIST OF TABLES

Page

Table 2.3-1 Approximate Distances by Municipality 2-9

EXHIBIT 2 – LOCATION OF FACILITIES

2.1 Introduction

Besicorp-Empire Power Company, LLC ("PowerCo" or "Applicant") is proposing to construct a 4.5-mile, 16-inch diameter, natural gas transmission pipeline ("Proposed Natural Gas Pipeline" or "Facility") from Tennessee Gas Pipeline's ("TGP") No. 200 high-pressure transmission pipeline in the Town of Schodack to the Empire State Newsprint Projects ("Projects") in the City of Rensselaer (see Figure 2-1, "Proposed Natural Gas Pipeline – NYSDOT Base Map"). The Projects are being developed by Besicorp-Empire Development Company, LLC ("BEDCO") and include a 330,000 metric ton per year (dry) Recycled Newsprint Manufacturing Plant ("RNMP") and a highly efficient 505-megawatt ("MW") cogeneration power plant ("BEDCO Power Plant"). Companion facilities to the Projects are a 345-kilovolt electric transmission line and the Proposed Natural Gas Pipeline.

The Proposed Natural Gas Pipeline will begin at a tap point on TGP's 24-inch high-pressure transmission pipeline No. 200 near its crossing of Route 9J in the Town of Schodack. A new gate station will be designed and constructed to the north of the TGP pipeline No. 200 on the eastern side of Route 9J. From the new gate station, the Proposed Natural Gas Pipeline will travel north through portions of the Towns of Schodack and East Greenbush, terminating at the BEDCO Power Plant site in the City of Rensselaer; all three municipalities are in Rensselaer County. Construction of the Proposed Natural Gas Pipeline is planned to commence in the Spring of 2005 with construction completed in the Fall of that same year.

The RNMP and BEDCO Power Plant are located on an industrially-zoned parcel, formerly a BASF Corporation manufacturing facility. The BEDCO Power Plant will be fueled

principally by natural gas. It will provide bulk power to the electric transmission grid as well as steam and electricity to the adjoining RNMP.

As shown on Figure 2-2, "Proposed Natural Gas Pipeline – Orthophoto Base Map" (four sheets, scale of 1"=500 ft.), the Proposed Natural Gas Pipeline will be located principally within the existing right-of-way ("ROW") of Route 9J. Along the proposed route of the Proposed Natural Gas Pipeline, Route 9J is a two-lane highway with full width paved shoulders; the total pavement width is typically 50 feet while the New York State Department of Transportation ("NYSDOT") ROW ranges from 60 to over 200 feet wide. For perspective, Figure 2-3, entitled "Proposed Natural Gas Pipeline – Route Photographs," provides a series of ten photos along the proposed route beginning at the TGP ROW, running north along the Proposed Natural Gas Pipeline route.

2.2 Facility Maps

In accordance with Sections 85-1.3(a)(1)(i) and 85-1.2(a)(2)(i, iv, viii & xi) of the implementing regulations of the New York State Public Service Law (16 NYCRR Part 85), NYSDOT maps, at a scale of 1:24,000, are provided at the end of this exhibit. These maps show the following required information:

- Location of the 4.5-mile, Proposed Natural Gas Pipeline from its interconnection with TGP, through the Towns of Schodack and East Greenbush, to the new gas large meter ("GLM") station to be constructed on the BEDCO Power Plant site in the City of Rensselaer.

- Typical ROW widths throughout the Proposed Natural Gas Pipeline route.

- Municipalities in which the Proposed Natural Gas Pipeline will be located, *i.e.*, the Towns of Schodack and East Greenbush, and the City of Rensselaer in Rensselaer County, New York.

As previously noted, more detailed mapping of the Proposed Natural Gas Pipeline route is provided as Figure 2-2.

In accordance with Section 85-1.2(a)(2)(vi), maps are also provided that depict known underground facilities to be crossed or paralleled. Figure 2-4, "Location of Facilities, Existing Natural Gas Pipelines" locates the existing TGP, Dominion Transmission Inc. ("DTI") and Niagara Mohawk Power Company ("NMPC") distribution pipelines in relation to the Proposed Natural Gas Pipeline. Figure 2-5 "Location of Other Underground Facilities (within Study Corridor)" locates existing fiber optic lines along Route 9J. There are no sanitary sewer or water lines that are crossed or paralleled along the proposed route. Nevertheless, prior to construction, the Dig Safely New York One Call Notification Center will be contacted and all utilities marked along roadways traversed by the Proposed Natural Gas Pipeline. Lastly, Figure 2-6 "Location of Overhead Electric Facilities (within Study Corridor)" locates existing overhead NMPC electric transmission lines in relation to the proposed Facility. The Proposed Natural Gas Pipeline route is crossed by two existing NMPC transmission ROWs, both located in the Town of East Greenbush.

A Phase 1 Cultural Resources Survey of the Proposed Natural Gas Pipeline route has been prepared and is included in Exhibit __ (JIK-1). The Survey concludes that "[n]o additional cultural resources work is recommended in association with the proposed route."

2.3 Facility Overview

The Proposed Natural Gas Pipeline route is located in Rensselaer County, specifically in the Towns of Schodack and East Greenbush and the City of Rensselaer.

With the exception of its final 0.6 mile, the 4.5-mile Proposed Natural Gas Pipeline will follow the existing state Route 9J ROW. The Proposed Natural Gas Pipeline will connect TGP's 24-inch, No. 200 high-pressure transmission line in the Town of Schodack, New York to the BEDCO Power Plant. PowerCo will construct a new gate station to the north of TGP's No. 200 pipeline on the eastern side of Route 9J. The gate station will be located several hundred feet north of the No. 200 pipeline. In addition to the Proposed Natural Gas Pipeline that will exit the new gate station to the north, PowerCo will be constructing the pipeline from the new gate station to connect to the No. 200 pipeline. TGP will connect this pipeline segment to its No. 200 pipeline by means of a hot tap. PowerCo is also seeking approval of this additional several hundred feet of pipeline as a part of this Application.

The Proposed Natural Gas Pipeline will exit the gate station and run north along the east side of Route 9J for approximately 3.9 miles.[1] At this point, the Proposed Natural Gas Pipeline will turn west to cross beneath Route 9J, a CSX rail line (double track) and a strip of land owned by the Albany Port District Commission.[2] The Facility will then turn north for the final six tenths of a mile on newly acquired ROW (consisting of a 20-foot permanent

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1 The final approximately 0.15 mile (850 feet) along the existing Route 9J ROW will require an easement over property that abuts, but is not within the Route 9J ROW.

2 The CSX rail line crossing and the crossing of the Albany Port District Commission land will be in a new 50-foot wide easement that will connect to the 50-foot wide construction easement under Route 9J.

easement and a 55-foot working easement) across four industrially-zoned properties and enter the southeast corner of the BEDCO Power Plant site.

Upon entering the BEDCO Power Plant site, the proposed Facility will head west along the southern edge of the site following an old railroad spur, cross the Port Access Highway near its intersection with Riverside Avenue and enter and follow the electric ROW for the BEDCO Power Plant. The Proposed Natural Gas Pipeline will terminate at the proposed GLM station located adjacent to the BEDCO Power Plant (see Figure 2-7, "Conceptual Drawing – Proposed Natural Gas Pipeline Northern End to GLM Station"). The GLM station will be installed to meter and regulate the gas entering the BEDCO Power Plant. Details regarding the new GLM station design, as well as the interconnection of the Proposed Natural Gas Pipeline with the TGP system, are provided in Exhibit 5, Design Information.

The Proposed Natural Gas Pipeline will be 16-inch diameter, coated steel, welded pipe. Operating pressure is expected to range from approximately 525 to 575 pounds per square inch gauge ("psig"). The Proposed Natural Gas Pipeline will be designed and tested for maximum allowable operating pressure ("MAOP") of 900 psig. It will be buried at a depth of thirty-six inches except in areas of bedrock, where the depth of burial will be a minimum of twenty-four inches. Railroad crossings will be a minimum of 60 inches deep.

2.3.1 Proposed Natural Gas Pipeline route analysis

The process for selecting the preferred route for the Proposed Natural Gas Pipeline was initiated in preparation for the December 2001 Article X Application (Case No. 00-F-2057) for the BEDCO Power Plant. The Article X process required an initial evaluation of the natural gas and electric interconnections that would serve the BEDCO Power Plant as

described in Chapter 17 of the Article X Application. The natural gas interconnection studies, as described in the Article X Application, included an initial evaluation of the adequacy of supply options and identified TGP as the preferred natural gas transportation services provider. An existing TGP gate station (the Brookview Gate Station) is located on TGP's No. 200 transmission pipeline in the Town of Schodack, approximately 4.5 miles south of the BEDCO Power Plant site, in close proximity to a NMPC electric and gas ROW. An approximately 6.3-mile route along two NMPC ROWs and the Route 9J ROW were identified in the Article X Application as the proposed route for the Proposed Natural Gas Pipeline.

More specifically, the Article X proposed route originated at the Brookview Gate Station (off Jensis Road in the Town of Schodack, approximately 6,000 feet east-southeast of the TGP crossing of Route 9J). At that time, the Proposed Natural Gas Pipeline route would generally follow NMPC's adjacent electric and gas ROW, containing the Schodack – Churchtown #14 Circuit 115 kilovolt ("kV"), the Greenbush – Schodack #13 Circuit 115 kV, the Greenbush – Hudson #15 Circuit 115 kV and a 12-inch DTI gas pipeline, northward to its intersection with NMPC's electric and gas ROW, containing NMPC's Albany Steam – Greenbush #1 and #2 Circuits 115 kV and a 30-inch DTI gas pipeline, then head westward to Route 9J along this second ROW. The Facility would then have continued along the edge of Route 9J into the City of Rensselaer to a point east of the northeast corner of the BEDCO Power Plant site. The pipeline would have entered the BEDCO Power Plant site in the northeast corner after passing beneath a railway underpass of the Port Access Highway. This route was approximately 6.3 miles in length; approximately two-thirds of which was on existing NMPC electric and gas transmission ROWs.

Evaluation of natural gas pipeline route alternatives has continued with the development of this Application. As an important part of the evaluation process, BEDCO has sought input from the New York State Public Service Commission ("NYSPSC") staff, New York State Department of Environmental Conservation ("NYSDEC") representatives, NYSDOT representatives, TGP representatives, the City of Rensselaer, the Town of East Greenbush, the Town of Schodack, area residents and other parties to the ongoing Article X proceeding. To date, a series of nine meetings with local officials, regulators and area residents have been conducted (BEDCO met on 11/21/02 with East Greenbush; 11/26/02 with NYSPSC; 11/27/02 with East Greenbush; 1/15/03 with East Greenbush; and 1/15/03 with NYSPSC staff – NMPC[3] met on 1/8/03 with East Greenbush; 2/5/03 with NYSPSC and NYSDEC staff; 3/4/03 with Rensselaer; and 3/5/03 with Schodack). In addition, BEDCO and NMPC conducted a public Open House on December 19, 2002 in the City of Rensselaer. This Open House was preceded by a mailing to all Rensselaer, East Greenbush and Schodack property owners within 1,000 feet of the proposed gas and electric line routes. This Open House was also publicized in BEDCO's December 2002 project newsletter; the newsletter was mailed to approximately 7,000 residents, including the property owners noted above. Advertisements were also placed in the local newspaper. The Proposed Natural Gas Pipeline was also publicized in subsequent BEDCO newsletters.

PowerCo's review, assessment and analysis of this input resulted in the conclusion that a more direct route along Route 9J was preferred. The presently proposed and preferred route is nearly 2 miles shorter, has excellent construction access from the existing highway,

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3 During early stages of route development, PowerCo was working with NMPC on the proposed Facility route and engineering.

minimizes new clearing and the need to work in the proximity of existing electric transmission lines. While both routes meet the statutory criteria of serving the need for the Proposed Natural Gas Pipeline, the shorter distance of the preferred route and its location in the largely previously-disturbed ROW of an active state highway results in a reduction in potential environmental impacts associated with the construction and operation of the Facility over those associated with the route proposed in the Article X Application. Finally, although the Proposed Natural Gas Pipeline located along either route would not pose an undue hazard to the public, the Facility is less likely to sustain third-party damage, the major safety issue associated with underground utilities, along the shorter preferred route where excavations are likely to be fewer in number and more closely monitored and controlled.

A further refinement to the northern ½ mile of the route was also made during this continued evaluation of natural gas pipeline alternatives in order to avoid the dense residential / commercial area along both sides of Route 9J between the Rensselaer City line and the Port Access Highway. The Proposed Natural Gas Pipeline will turn west, crossing beneath Route 9J, the CSX tracks and land owned by the Albany Port District Commission at a point approximately 330 feet south of the City of Rensselaer municipal boundary (see Figure 2-2, Sheet 4 of 4). The Proposed Natural Gas Pipeline will then run on new ROW across currently vacant industrial land to the BEDCO Power Plant site. While requiring a limited stretch of new ROW, this is a more direct approach and completely avoids the narrower Route 9J ROW and increasingly developed area along Route 9J in the City of Rensselaer (*see*, Figure 2-3, Picture 2-3.10).

As previously stated, the Proposed Natural Gas Pipeline will traverse the Towns of Schodack and East Greenbush and the City of Rensselaer, all located within Rensselaer

County, New York. The approximate mileage per municipality is provided below, followed by a description of the proposed route through each municipality.

Table 2.3-1 Approximate Distances by Municipality

Town / City	Approximate Distance (miles)
Schodack	1.2
East Greenbush	2.7
Rensselaer	0.6
Total	**4.5**

2.3.2 Town of Schodack

The Proposed Natural Gas Pipeline will connect TGP's 24-inch, No. 200 high-pressure transmission line in the Town of Schodack, New York to the BEDCO Power Plant. PowerCo will construct a new gate station to the north of TGP's No. 200 pipeline on the eastern side of Route 9J. The gate station will be located several hundred feet north of the No. 200 pipeline. In addition to the Proposed Natural Gas Pipeline that will exit the new gate station to the north, PowerCo will be constructing the pipeline from the new gate station to connect to the No. 200 pipeline. TGP will connect this pipeline segment to its No. 200 pipeline by means of a hot tap. PowerCo is also seeking approval of this additional several hundred feet of pipeline as a part of this Application.

From the new gate station, the Proposed Natural Gas Pipeline proceeds within the eastern bounds of the Route 9J ROW. The Facility will head north, paralleling Route 9J to the East Greenbush town line. This portion of the Facility route (north of the new gate station) requires the crossing of two Class C streams. (The portion of the Facility from the new gate

station south to TGP's No. 200 transmission pipeline will also cross one Class C stream, the *Vierda Kill.*) The Papscannee Marsh and Creek / Papscanee Island Nature Preserve ("Papscanee") is located to the west of the Route 9J ROW in this area and will be avoided by the Facility. The 1.2-mile route segment along Route 9J in the Town of Schodack is largely undeveloped, with only four dwellings along this stretch of the proposed route, all on the eastern side of the roadway. Only two of these dwellings are within 150 feet of the Proposed Natural Gas Pipeline (see Figure 2-2, Sheet 1 of 4).

2.3.3 Town of East Greenbush

From the Schodack / East Greenbush municipal boundary, the Proposed Natural Gas Pipeline route continues along the eastern edge of Route 9J. The portion of the route in East Greenbush along the eastern edge of Route 9J is also lightly populated with only twelve dwellings along more than two miles of highway. These dwellings are all located on the eastern side of the road, five of which are within 150 feet of the Proposed Natural Gas Pipeline (see Figure 2-2, Sheets 2, 3 & 4 of 4).

For a significant portion of the Proposed Natural Gas Pipeline route through East Greenbush, it will parallel existing Verizon fiber optic lines and an electric distribution line, all of which share the Route 9J ROW. There is one roadway crossing (Hays Road) on this route segment (see Figure 2-2, Sheet 2 of 4). This roadway crossing will occur just east of the point that Hays Road intersects Route 9J. R. L. Smith Auto Sales, an automobile sales facility, is located on the northeast corner of this T-intersection (see Figure 2-3, Picture 2-3.4).

A valve site will be located north of the Hays Road intersection with Route 9J. This valve site will include a 10-foot by 40-foot fenced area with valve stem and valve facilities. A

typical valve site design diagram is included as Figure 5-3 of Exhibit 5.[4] The valve site(s) are identified on the construction drawings that are being provided along with this Application.

The approximately 2.7-mile route segment in East Greenbush crosses three Class C streams, one of which is identified as a cold-water fishery resource. The Papscanee is located between the western edge of Route 9J and the Hudson River along much of this route segment, but will be avoided by the Facility.

The Proposed Natural Gas Pipeline will also cross the 30-inch DTI natural gas transmission line in the vicinity of NMPC's electric and gas ROW containing NMPC's Albany Steam – Greenbush #1 and #2 Circuits 115 kV (see Figure 2-6). Discussions with DTI personnel indicate that this pipeline is incapable of supplying the required volume of natural gas at the pressures necessary for the BEDCO Power Plant without a substantial upgrade of the DTI system for about 30 - 40 miles of pipeline before a potential interconnection point.

The Proposed Natural Gas Pipeline route continues along the eastern edge of the Route 9J ROW crossing a second NMPC electric ROW that contains the Greenbush #16 Circuit 115 kV and the Feura Bush – Reynolds Road #17 Circuit 115 kV overhead electric circuits while continuing in a northerly direction in the Town of East Greenbush. A NMPC natural gas distribution pipeline is located on the western side of Route 9J in the Town of East Greenbush from Teller Road north. The proposed Facility will parallel this distribution

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[4] A second valve site might be required near the crossing of the CSX rail line. Final details as to the need for this valve site will be developed. Should this valve site be required, it also will include a fenced area with valve stem and valve facilities.

pipeline on the opposite (eastern) side of Route 9J in this area, in order to avoid the NYSDEC-regulated Sterling 2 landfill that is located on the western side of Route 9J.

Approximately 330 feet south of the Rensselaer City line, the Proposed Natural Gas Pipeline will turn west to pass under Route 9J, a CSX rail line (double-track) and a strip of land owned by the Albany Port District Commission. The Proposed Natural Gas Pipeline will then follow a new easement north, crossing into the City of Rensselaer.

2.3.4 City of Rensselaer

In the City of Rensselaer, the new easement travels through the eastern edge of four industrially-zoned parcels before entering the BEDCO Power Plant site. While a small portion of this easement is in forested wetland, no roads or streams will be crossed in this stretch and no dwellings are present along the ROW within the City of Rensselaer.

Upon entering the BEDCO Power Plant site, the proposed Facility will head west along the southern edge of the site following an old railroad spur, thereby minimizing wetland impacts, cross the Port Access Highway near its intersection with Riverside Avenue and enter and follow the electric ROW for the BEDCO Power Plant. Figure 2-7, "Conceptual Drawing – Proposed Natural Gas Pipeline Northern End to GLM Station" provides a conceptual plan of this portion of the Facility route.

The Proposed Natural Gas Pipeline terminates at a new GLM station in the central portion of the BEDCO Power Plant site.

2.4 Right-of-Way Details

The following sections are submitted in accordance with Sections 85-1.3(a)(1)(i) and 85-1.2(a)(2)(iv, v, ix) of the implementing regulations of the NYS Public Service Law (16 NYCRR Part 85).

2.4.1 Existing Right-of-Way

The Proposed Natural Gas Pipeline will not follow any existing electric or gas transmission ROWs, although it will cross two 125-foot wide NMPC electric and gas ROWs in the Town of East Greenbush, one containing the Greenbush #16 Circuit 115 kV and the Feura Bush – Reynolds Road #17 Circuit 115 kV overhead electric circuits and the second containing the Albany Steam – Greenbush #1 and #2 Circuits 115 kV along with the DTI 30-inch natural gas pipeline. These ROWs are designated on Figure 2-6. An electric distribution easement will be followed along much of the Route 9J ROW.

2.4.2 New Right-of-Way Acquisition

Approximately 3.9 miles of the 4.5–mile, Proposed Natural Gas Pipeline will be placed within the existing Route 9J ROW. As previously discussed, based on NYSDOT ROW drawings, the Route 9J ROW is generally 60 to more than 200 feet in width; the existing paved surface (2 travel lanes, 2 full width shoulders) is approximately 50–feet wide. The existing pavement will not be removed to install the proposed Facility. Given the width and characteristics of the existing Route 9J ROW, the majority of the Facility route along Route 9J will be within the NYSDOT ROW. However, the final approximately 0.15 miles (850 feet), before turning west, and passing under Route 9J will require a new permanent easement over private property. In addition, permanent easements are needed across

certain private properties along Route 9J due to the narrow NYSDOT Row. Additionally, some limited temporary easement along the Route 9J ROW will be needed for a pipe storage / marshalling yard. Some clearing will be required along the Route 9J ROW but it will primarily consist of some brush and small trees.

The construction of the Facility will require use of the shoulder area and may require the use of a single travel lane for construction access. The Applicant has identified two areas where use of the travel lane for construction access may be required. These areas have been identified on the construction drawings that have been provided along with the Application. Additional areas may be required by NYSDOT.

The existing paved surface of Route 9J is sufficiently wide to allow for continued two-way traffic flow using the remaining travel lane and full width shoulder. Work along Route 9J, including the use of a shoulder and possibly a travel lane, will be closely coordinated with NYSDOT. Traffic details will be provided as required together with the necessary temporary signage and barriers to ensure a safe work area.

A new 50-foot wide construction easement will be required from the point that the Proposed Natural Gas Pipeline leaves the Route 9J ROW. This new easement will allow for the placement of the pipeline under the CSX rail line and the Port of Albany District Commission land.

An additional easement will be required along the eastern boundaries of the industrial properties to the west of the CSX rail line, to the point where the Proposed Natural Gas Pipeline enters the BEDCO Power Plant site. This additional easement will be a 75-foot wide temporary easement for construction purposes. Within this 75-foot width, a final permanent easement will be maintained as a cleared area of 20 feet in width.

The Proposed Natural Gas Pipeline will be located in a permanent 20-foot wide easement along the final stretch of the Facility route across the BEDCO Power Plant site. This 20-foot wide easement will be within a 35-foot wide construction corridor along this part of the Facility route. A small portion of this area is currently forested and would require clearing.

2.4.3 Temporary Right-of-Way for Construction

As noted above, the majority of the proposed route for the Facility will be within the existing Route 9J ROW. Approximate land requirements for construction of the Proposed Natural Gas Pipeline are identified in Table 4.5-2 in Exhibit 4, Environmental Assessment. In general, the construction area for the Proposed Natural Gas Pipeline will require up to a maximum width of 75 feet depending on site-specific conditions. In areas where the Proposed Natural Gas Pipeline will cross under major roadways or other areas with special construction needs such as stream crossings, up to an additional 75 feet of temporary workspace may be required on either side of the pipeline. An additional easement of 75-feet long by 50-feet wide will be required at both ends for the crossing of Route 9J, the CSX railroad and the Albany Port District Commission property, to allow for bore pit working areas for the installation of the pipe under these areas. These areas are identified on the construction drawings, which have been submitted along with this Application.

2.4.4 Right-of-Way Clearing

Right-of-way clearing is discussed in Exhibit 4, Environmental Assessment. Section 4.5 in Exhibit 4 includes tables showing land use effects of construction and maintenance along with the approximate acreage of clearing required.

2.4.5 Access and Maintenance Routes

Access to the Proposed Natural Gas Pipeline route, for construction and maintenance, will primarily be from Route 9J. The new easement west of the CSX rail line will be accessed from Riverside Avenue across one or more of the four industrial properties to be crossed by the proposed Facility and / or from the former railroad spur along the southern edge of the BEDCO Power Plant site. Equipment movement during construction will be primarily adjacent to the proposed permanent easement.

Access road(s) will also be required for the new gate station and might be required for the proposed valve site north of Hays Road. In addition, a temporary access road from Route 9J will likely be required to the pipe storage / marshalling yard. Approximate locations for these access roads can be found on the construction drawings that have been submitted along with this Application.

FIGURES

Exhibit 3

EXHIBIT 3

DEMONSTRATION OF NEED

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

EXHIBIT 3 – DEMONSTRATION OF NEED **3-1**

3.1 Introduction 3-1

3.2 Need for the Pipeline 3-1

3.3 Pipeline Capacity 3-3

3.4 Adequacy of Supply Options 3-4

EXHIBIT 3 – DEMONSTRATION OF NEED

3.1 Introduction

The following section addresses the requirements of Section 85-1.3(a)(3) of the implementing regulations of the NYS Public Service Law (16 NYCRR Part 85). It demonstrates (i) that a market (specific purchaser) for the natural gas exists, (ii) that retail customers will not be served by the proposed pipeline, and (iii) that the proposed pipeline will offer benefits as a result of delivery of natural gas to a new power plant associated with the redevelopment of an industrial site.

3.2 Need for the Pipeline

The proposed Besicorp-Empire Power Company LLC ("PowerCo" or "Applicant") 4.5-mile, 16-inch diameter natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility") will be constructed to supply natural gas to the cogeneration power plant proposed as one component of the Empire State Newsprint Projects ("Projects"). The Projects are being developed by Besicorp-Empire Development Company, LLC ("BEDCO") at the former BASF Corporation ("BASF") site in the City of Rensselaer, New York. The Projects will include a Recycled Newsprint Manufacturing Plant ("RNMP") and the nominal 505-megawatt ("MW") cogeneration power plant ("BEDCO Power Plant"). Currently, no natural gas transmission pipeline serves the BEDCO Power Plant site and existing gas facilities serving the BASF facility are insufficient to supply the natural gas demand of the proposed BEDCO Power Plant.

The Projects will provide a number of economic, social and environmental benefits on a local and state level. The Projects will employ approximately 274 full-time staff during operation and will provide peak construction employment in excess of 1000 jobs for the

entire development project. The Projects will contribute significantly to the local tax base and provide a stimulant for local and regional businesses. The BEDCO Power Plant, by utilizing clean-burning natural gas, will contribute an increased supply of clean electricity to the wholesale electric market. Additionally, the Projects will redevelop an industrial site (former site of BASF) and help revitalize the area since BASF's production activity departure from the location in 2000.

The Projects will employ the efficiency of cogeneration by combining a power plant with a host industrial plant. The cogeneration portion of the Projects, *i.e.*, the BEDCO Power Plant, will produce 505 MW of electricity of which approximately 55 MW will be used in the RNMP. The RNMP will recycle 430,000 metric tonnes per year of old newsprint and magazines, and produce 330,000 metric tonnes per year of recycled newsprint.

PowerCo will design, construct, own and operate the Proposed Natural Gas Pipeline that will provide natural gas to the BEDCO Power Plant. Because the Proposed Natural Gas Pipeline will originate at a direct tap from the Tennessee Gas Pipeline ("TGP") system, there will be no impact on the local Niagara Mohawk Power Corporation ("NMPC") distribution system. TGP will obtain Federal Energy Regulatory Commission ("FERC") approval for the service tap.

Peak day natural gas requirements for the BEDCO Power Plant will be approximately 125,000 dekatherms ("dth") and peak hourly natural gas requirements for this project will be approximately 5,200 dth. Annual gas consumption at the Projects is expected to range from 27 million dth to 43 million dth. On a seasonal basis, winter (Nov – Mar) requirements will range from 11 - 17.5 million dth while summer (April – Oct) requirements will range from 16 - 25.5 million dth. It is anticipated that TGP will transport

PowerCo-owned natural gas, up to the specified maximum gas volume, at the required minimum pressure of 440 psig, to the new gate station pursuant to TGP's approved transportation tariff.

3.3 Pipeline Capacity

The 16-inch Proposed Natural Gas Pipeline will have adequate capacity to serve the BEDCO Power Plant. No additional compression will be required at the new gate station. Natural gas will be delivered at the new gate station via TGP's 24-inch No. 200 line. Upstream, there is sufficient capacity on the integrated U.S. and Canadian natural gas pipeline network as described below.

The nation's natural gas pipeline system has grown substantially since the early 1990's with more than 20 billion cubic feet per day of inter-regional capacity added through the end of 2000, a 27 percent increase. Much of the pipeline construction during the past several years has focused on bringing Canadian gas to the northeast and mid-west U.S. markets, and bringing Sable Island gas to the northeast U.S. market. The completion of the Maritimes and Northeast Pipeline Project, the Portland Natural Gas Transmission System and the Alliance Pipeline represent an increase of about 23 percent in natural gas import capability. Other proposed pipelines such as the Blue Atlantic project will deliver additional volumes from Sable Island into the northeast U.S. market. The completion of these pipelines also enhances the pipeline capacity to deliver natural gas to the TGP system at Dracut, MA, one of several hubs from which TGP will be taking service. TGP recently completed an expansion of the Dracut facilities to increase takeaway capacity significantly. Additional expansion is expected to be completed by TGP, also in the Dracut area, during 2004, in sufficient time to support the gas supply to the Projects.

As a result of numerous new pipeline projects and an enhanced system of pipeline interconnects in the northeast, there is sufficient pipeline capacity to serve the BEDCO Power Plant.

3.4 Adequacy of Supply Options

Currently, the northeast's natural gas supply is primarily sourced from the Gulf Coast, Appalachian Basin, Western Canada and more recently from Sable Island off the eastern coast of Canada.

The American Gas Association estimates that natural gas reserves grew to 180 trillion cubic feet ("tcf") in 2001, the highest level since 1987. Recent projections from the American Gas Association study "Fueling the Future: Natural Gas & New Technologies for a Cleaner 21st Century" indicate that despite anticipated demand increases, exploration and improved drilling techniques will ensure sufficient gas supplies. With such advances, the report notes, domestic gas production can increase from today's 19-plus quads to more than 29 quads in 2020.[1]

Imports from Canada continue to grow to meet the increasing U.S. demand for natural gas. These Canadian imports have grown from 1.4 tcf in 1990 to 3.3 tcf in 1999. Canada exports about one half of the natural gas it produces into the U.S. Canadian proven gas reserves have been estimated at 75 tcf with potential reserves in the 250 to 350 tcf range, while annual demand is approximately 5.5 tcf or enough gas for the next 60 or more years.

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[1] American Gas Foundation, Fueling the Future: Natural Gas & New Technologies for a Cleaner 21st Century 2000 (note: one tcf of natural gas is equivalent in energy content to 1.03 quads.)

Gas reserves at Sable Island are estimated to be about 18 tcf. By 2005, daily production is estimated to be about 850 million cubic feet ("MMcf") per day. Gas reserves in the Western Canadian Sedimentary Basin are estimated to be about 54 tcf of undiscovered natural gas. Canadian offshore natural gas fields in the Atlantic Ocean, including Sable Island, are estimated to contain about 64 tcf and the Mackenzie Delta in the Northwest Territories is estimated to contain an additional approximately 64 tcf.

PowerCo will have access to sufficient resources to provide the quantities of natural gas and pipeline capacity necessary to serve the natural gas requirements of the BEDCO Power Plant. Gas supply contracts between PowerCo or its affiliates and gas suppliers, whether firm and / or interruptible, or other arrangements for gas supply will be arranged prior to financial close on the Projects.

Exhibit 4

EXHIBIT 4

ENVIRONMENTAL ASSESSMENT

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

EXHIBIT 4 – ENVIRONMENTAL ASSESSMENT			**4-1**
4.1	Introduction		4-1
4.2	General Project Description		4-2
4.3	Pipeline Construction Procedures		4-3
	4.3.1	Standard Construction and Restoration Techniques	4-3
		4.3.1.1 Cross-Country Methods	4-4
		4.3.1.2 Stove Pipe Construction Methods	4-13
	4.3.2	Specialized Construction Techniques	4-14
		4.3.2.1 Residential Areas	4-14
		4.3.2.2 Road Crossings	4-16
		4.3.2.3 Railroad Crossings	4-18
		4.3.2.4 Rock Removal and Blasting	4-19
		4.3.2.5 Wetland Construction Procedures	4-20
		4.3.2.6 Waterbody Construction	4-21
	4.3.3	Miscellaneous Construction Issues	4-24
		4.3.3.1 Access Roads	4-24
		4.3.3.2 Pipe and Contractor Yard	4-25
		4.3.3.3 Storage of Fuels and Lubricants	4-26
		4.3.3.4 Environmental Training for Construction	4-26
		4.3.3.5 Environmental Monitoring During Construction	4-27
		4.3.3.6 Construction Workforce and Schedule	4-28
		4.3.3.7 Additional Work / Staging Areas	4-28
4.4	Operation and Maintenance Procedures		4-30
	4.4.1	Cleared Areas	4-31
	4.4.2	Erosion Control	4-32
	4.4.3	Periodic Pipeline and ROW Patrols	4-32
4.5	Land Use		4-33
	4.5.1	Overview	4-33
	4.5.2	Pipeline Facilities	4-34
	4.5.3	Facility Abandonment / Replacement	4-38
	4.5.4	Residential Areas	4-39
		4.5.4.1 Existing Residences	4-39
		4.5.4.2 Proposed Residences	4-39
	4.5.5	Public Land, Recreation, and Other Designated Areas	4-39
	4.5.6	Coastal Zone Management	4-40
	4.5.7	Impacts and Mitigation	4-49
	4.5.8	Agency and Landowner Consultations	4-49
		4.5.8.1 Agency Consultations	4-49
		4.5.8.2 Landowner Consultations	4-50
4.6	Geology / Hydrology		4-50
	4.6.1	Geology	4-50
		4.6.1.1 Surficial Geology	4-51

TABLE OF CONTENTS (Continued)

	4.6.1.2	Bedrock Geology	4-52
4.6.2	Groundwater		4-52
4.7	Natural Resources		4-53
4.7.1	Fisheries		4-53
	4.7.1.1	Fishery Classification	4-53
	4.7.1.2	Fisheries of Special Concern	4-54
	4.7.1.3	Construction and Operation Impacts	4-55
	4.7.1.4	Minimization of Impacts	4-56
4.7.2	Endangered Species		4-58
	4.7.2.1	Threatened and Endangered Species	4-58
	4.7.2.2	Least Bittern	4-59
	4.7.2.3	Large Twayblade	4-60
	4.7.2.4	Handsome Sedge	4-61
4.7.3	Vegetation and Wildlife		4-62
	4.7.3.1	Overview	4-62
	4.7.3.2	Setting	4-62
	4.7.3.3	Existing Terrestrial Community Types	4-63
		4.7.3.3.1 Successional Old Field	4-64
		4.7.3.3.2 Successional Shrubland	4-65
		4.7.3.3.3 Forested Areas	4-71
	4.7.3.4	Unique, Sensitive, or Protected Habitats	4-72
	4.7.3.5	Impacts and Mitigation	4-72
4.7.4	Wetlands		4-73
	4.7.4.1	Wetland Delineation Corridor	4-74
		4.7.4.1.1 Segment 1 – Route 9J	4-74
		4.7.4.1.2 Segment 2 – West of Route 9J and CSX ROW	4-76
	4.7.4.2	Existing Wetland Conditions	4-76
		4.7.4.2.1 Segment 1	4-77
		4.7.4.2.2 Segment 2	4-85
	4.7.4.3	Wetland Functions / Values	4-87
4.8	Soils		4-90
4.8.1	Introduction		4-90
4.8.2	Soils Along the Route		4-90
4.8.3	Impacts and Mitigation		4-95
4.9	Visual, Noise, Air Impacts		4-98
4.9.1	Visual		4-98
4.9.2	Air Quality		4-99
4.9.3	Noise		4-100
4.10	Historical and Archaeological Resources		4-100
4.11	Literature Cited / References		4-100

LIST OF FIGURES

Figure 4-1 Hydrology

Figure 4-2 Land Categories

Figure 4-3 Soils

Figure 4-4 Surficial Geology

Figure 4-5 Stream Crossings

Figure 4-6 Wetlands – Orthophoto Base Map

Figure 4-7 Soil Limitations

LIST OF TABLES

		Page
Table 4.5-1	Linear Miles by Land Use / Cover Type Category	4-35
Table 4.5-2	Acreage by Land Use / Cover Type Category	4-36
Table 4.5-3	Estimated Clearing of Forest	4-37
Table 4.5-4	Acreage Affected by Aboveground Facilities	4-37
Table 4.5-5	Consistency with Local and State Coastal Zone Management Policies	4-41
Table 4.7-1	Stream Crossings	4-54
Table 4.7-2	Upland Vegetation Communities and Representative Plant Species	4-66
Table 4.7-3	Potential Wildlife Species within each Community Type	4-68
Table 4.7-4	Summary of Wetland Features Along the Proposed Natural Gas Pipeline Wetland Study Corridor	4-79
Table 4.7-5	Wetland Functions and Values (Summary)	4-90
Table 4.7-6	Wetland Functions and Values	4-91
Table 4.8-1	Facility Site Soils and General Characteristics	4-97

EXHIBIT 4 – ENVIRONMENTAL ASSESSMENT

4.1 Introduction

This section provides an environmental assessment of the proposed project relative to potential impacts on natural and cultural resources. The results of this evaluation address the requirements of Section 85-1.3(a)(1)(i) and Section 85-1.2(a)(3)(i-iv) of the implementing regulations of the NYS Public Service Law (16 NYCRR Part 85). Detailed information is provided regarding land use, wetlands and hydrological characteristics, wildlife and fisheries, soils and geology and archaeological and historical aspects of the proposed 4.5-mile, 16-inch diameter, Besicorp-Empire Power Company, LLC ("PowerCo" or "Applicant") natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility"). The study corridor encompassed a one-mile area centered on the Facility. The field surveys and cultural resource investigations were limited to a corridor that encompasses both the permanent right-of-way ("ROW") as well as the areas of temporary workspace necessary to construct the Facility. A Phase 1 Cultural Resources Survey of the Proposed Natural Gas Pipeline route has been prepared and is included in Exhibit __ (JIK-1).

A description of the Proposed Natural Gas Pipeline alignment has been included within this Exhibit. The information provided herein identifies environmentally sensitive resources along the proposed route and provides impact avoidance and minimization techniques that the Applicant will use during construction and operation of the Facility. PowerCo intends to comply with the New York State Public Service Commission ("NYSPSC") staff-developed Environmental Management and Construction Standards and Practices ("EM&CS&P") approved in Case 70100 (Case 70100 – Environmental Management and Construction Standards and Practices, issued March 6, 1985) as recently updated. Copies of an EM&CS&P are provided in Volume 2 of this Application.

4.2 General Project Description

The Proposed Natural Gas Pipeline will consist of 4.5 miles of 16-inch diameter, coated steel, welded pipe designed for a maximum allowable operating pressure of 900 psig. Actual operating pressure will range from approximately 525 to 575 pounds per square inch gauge ("psig"). The majority of the pipeline will be located within the public ROW of Route 9J.

The Proposed Natural Gas Pipeline route is located in Rensselaer County, specifically in the Towns of Schodack and East Greenbush and the City of Rensselaer. The route of the proposed Facility will primarily follow the Route 9J ROW. The Proposed Natural Gas Pipeline will travel north from a tap point on Tennessee Gas Pipeline Company's ("TGP") No. 200 high-pressure natural gas transmission line in the Town of Schodack. The proposed Facility will travel north to a new gate station, to be constructed on a parcel of land abutting Route 9J in the Town of Schodack just north of the TGP ROW that contains TGP's No. 200 transmission pipeline.

The Proposed Natural Gas Pipeline will exit the gate station and head north along the eastern edge of the Route 9J ROW to a location in the Town of East Greenbush approximately 330 feet south of the City of Rensselaer municipal boundary (*see* Figure 2-2, Sheet 4 of 4) where it will pass under Route 9J, the CSX railroad, and a parcel of land owned by the Albany Port District Commission. (The Facility will be placed in a construction easement within the Route 9J ROW but will require new easements along the northern approximately 850 feet before passing under Route 9J and for passing under the CSX rail line and the Port of Albany District Commission land.) On its northward route along Route 9J through the Town of East Greenbush, the Proposed Natural Gas Pipeline

would also cross Hays Road, just east of the point that Hays Road intersects Route 9J. R. L. Smith Auto Sales, an automobile sales facility, is located on the northeast corner of this T-intersection (see Figure 2-3, Picture 2-3.4).

After passing under Route 9J, the CSX railroad and the Albany Port District Commission land, the Proposed Natural Gas Pipeline will continue northward on a new easement. The proposed Facility will follow this easement north, paralleling the CSX rail line, into the City of Rensselaer and onto the southeast corner of property that was the former site of the BASF Corporation manufacturing facility. Besicorp-Empire Development Company, LLC ("BEDCO") is developing its Empire State Newsprint Projects ("ESNP"), consisting of a Recycled Newsprint Manufacturing Plant ("RNMP") and a cogeneration power plant ("BEDCO Power Plant") at this location. The Proposed Natural Gas Pipeline will head west along an abandoned rail spur, cross the Port Access Highway near its intersection with Riverside Avenue and follow the proposed electric ROW on the BEDCO Power Plant site and terminate at the proposed site of a new gas large meter ("GLM") station located adjacent to the BEDCO Power Plant. The GLM station will be installed to meter and regulate the gas entering the BEDCO Power Plant. Figure 2-7 provides a conceptual plan for this end of the proposed Facility.

4.3 Pipeline Construction Procedures

4.3.1 Standard Construction and Restoration Techniques

The Proposed Natural Gas Pipeline will be constructed using standard pipeline construction and ROW restoration methods. Routine pipeline construction techniques that will be used include cross-country and stovepipe techniques. All pipeline fabrication activity will comply with applicable Federal, state and local safety regulations and guidelines, and all

construction activity will comply with the specific requirements of the necessary permits and the EM&CS&P. It should be noted that prior to construction, the Dig Safely New York One Call Notification Center will be contacted and all utilities marked along Facility construction areas. Where there is a question as to the location of utilities such as water, cable, gas, and sewer lines, they will be located by field instrumentation and test pits.

The following sections describe general construction procedures for cross-country and stovepipe gas pipeline construction as well as the specific construction techniques that will be utilized in environmentally sensitive areas.

4.3.1.1 Cross-Country Methods

The majority of the northern segment of the Proposed Natural Gas Pipeline will be installed using conventional overland, buried pipeline construction techniques and methods. These cross-country pipeline construction methods are standard in the industry and constitute a safe, stable and reliable pipeline facility consistent with U.S. Department of Transportation requirements and regulations. Installation of the Proposed Natural Gas Pipeline using these methods will be performed in a continuous progression of distinct construction steps. The following information describes the sequential process of cross-country pipeline construction.

Initial Clearing Operations

Prior to the start of vegetation clearing, ROW boundaries and workspace limits will be clearly marked to ensure that no clearing will occur beyond these boundaries. Wetland edges will also be clearly marked so that special clearing methods can be applied to wetland areas as appropriate. To insure that construction and future maintenance activities

will be conducted in the safest and most effective manner, all woody vegetation within the pipeline ROW and temporary construction workspace will be removed by either mechanical or hand cutting methods. Methods used for clearing activities will be selected as appropriate to minimize both severe rutting and erosion.

In wetlands and other sensitive areas, trees and brush will be cleared using all-terrain equipment or hand-cut depending on soil moisture and load bearing conditions at the time of clearing operations. Use of heavy equipment will be minimized to avoid excessive rutting and soil disturbance. Vegetation in these areas that will not directly interfere with access, pipe installation, and future maintenance will be retained. To the extent practical, woody vegetation will be cut at ground level leaving root systems intact to facilitate soil stabilization and rapid re-vegetation following completion of construction. Tree stumps will be removed as necessary over the ditch line and in other areas for safety purposes.

The cleared width of the construction ROW will be minimized to the extent practical. Considerations dictating the width of cleared ROW include, the need to provide space for topsoil segregation, spoil storage and staging, and activities such as stringing, pipe bending, welding of pipe sections, lowering-in, and back-filling.

Erosion Control Installation

Immediately after vegetation clearing activities, erosion control devices will be installed adjacent to wetlands and other sensitive resource locations as specified in the EM&CS&P and as required by other applicable permits. Erosion control measures will be inspected on a daily basis in areas where active construction or equipment operation is occurring. In areas where no construction or equipment operation is occurring, inspections will be completed on a weekly basis. Erosion control measures will also be inspected within 24

hours of a storm event producing 0.5 inches of rainfall or greater. Damaged erosion control measures will be repaired in an expeditious manner. Erosion control measures will remain in place and be maintained throughout construction until the construction ROW is permanently stabilized with vegetation as determined by the environmental inspector employed by PowerCo's construction contractor in compliance with the EM&CS&P.

ROW and Temporary Construction Workspace Grading

Following clearing activities and installation of erosion control measures, the construction ROW will be graded to provide safe and adequate passage of construction equipment. This also allows for efficient pipeline installation activities. In general, the entire width of the construction ROW, including the temporary construction workspace will be graded. Typically, the grading of the ROW will be completed with bulldozers. In some instances, backhoes will be used in conjunction with bulldozers when it is necessary to remove large boulders and or tree stumps. No grading will be done in wetlands except under severe topographic conditions that restrict safe installation of the pipeline.

Trench Excavation

A trench will be excavated to the proper depth that will allow for a minimum of 36 inches of cover over the pipeline. In situations when the trench would pass through solid rock, the trench will be excavated to a depth that will allow for a minimum of 24 inches of cover. Excavated material will be placed parallel to the trench. By doing so, unnecessary movement of machinery across the terrain is minimized.

In some locations, the excavated trench may fill with ground water. Should it become necessary to pump water out of the trench, it will be pumped to a stable vegetated area

outside of any wetland resource areas wherever possible or filtered through a filter bag or siltation barrier. Under no circumstances, will trench water be pumped or discharged directly into wetland resource areas or on bare, unstabilized soil. Used filter bags or other devices used to contain sediment during dewatering activities will be disposed in an approved manner.

Stringing

Stringing is the activity of hauling the line pipe from the pipe storage yard onto the ROW. This work will be accomplished by tractor-trailers traveling between the pipe yard and the ROW after the trench is excavated. The pipe is generally laid on the edge of the ditch by a sideboom tractor.

Bending

Once the sections of pipe have been placed on the ROW, each "joint" of pipe is bent as necessary so that the pipe fits the horizontal and vertical contours of the previously dug trench. The bending engineer will survey the ditch to determine the location and amount of each field bend. This information is marked on each piece of pipe so the bending foreman can make the appropriate pipe bends. Pipe is usually bent with a hydraulic pipe-bending machine. Each section of the bent pipe is placed along the edge of the trench. It is then welded into long, continuous sections of pipeline.

Welding

The individual sections of pipe are welded together in two steps. A crew of welders called the pipe gang or front-end welders accomplishes the first step. This crew consists of those personnel who will clean and align the pipe sections in preparation for the welds and the

welders who will place at least the first two welding passes in the welding process. Firing line or back-end welders accomplish the second step. Back-end welders normally use their own truck mounted welding machines. They complete the welds started by the front-end welders. The welding crew welds the pipe into long strings, to minimize the number of welds that are made in the trench by a third crew of welders, the so-called tie-in welds (see below).

Radiography

After welding, each weld is evaluated using radiographic methods to insure that it meets structural integrity standards. The radiographic or x-ray crew typically consists of two people working from a field vehicle fitted with radiographic equipment. Radiographs are taken in the field and processed on-site for virtually instantaneous quality control results. Following the processing of the radiographs, each radiograph is evaluated by an inspector(s) who assesses the quality of each weld. Each weld that does not meet the requirements established by the American Petroleum Institute Standard API 1104 are marked by the X-ray crew for repair or removal.

Weld Repair

On large projects, the contractor may establish a weld repair crew. This crew generally follows the radiography crew to repair welds that do not meet inspection standards. The weld repair crew normally works from its own welding rig. Repaired and replaced welds are again X-rayed and inspected.

Coating Inspection and Repair

After pipeline welds are approved, the welded joints are coated with a protective coating, using shrink sleeves, by the coating crew. Coating crews usually work from a single pick-up truck. Pipeline sections are generally coated with a protective covering in the pipe mills with the exception of the ends that will be welded together. In conjunction with corrosion (cathodic) protection systems installed on the pipeline, the coating acts as a means to protect the pipeline from corrosion. The type of coating used on natural gas pipelines is an extruded polyethylene or fusion bond epoxy coating.

The coating crew installs the protective coating over the weld area and checks all of the coating on previously coated pipeline for defects. Pipeline coatings are electrically insulating. Because of this, the coating is inspected electrically to insure that there are no locations on the pipeline where there is an opening in the coating to allow unwanted current flow.

Lowering-in

After the completion of pipeline coating and coating testing, the lowering-in crew places the pipeline in the trench. Lowering-in is usually done very carefully with sideboom tractors so the pipe and the coating are not damaged. In addition to the sideboom tractors, this crew may also use backhoes, draglines, and / or bulldozers to hold the pipe or clean out the trench before the pipe is lowered in.

Tie-Ins

Once the sections of pipe are lowered-in, the tie-in crew makes the final welds in the trench. This crew generally works independently of other pipeline construction crews

completing lowering-in, lining-up, welding, radiographic and pipeline coating activities.

Backfilling

All suitable material excavated during trenching will be replaced in the trench following complete installation of pipeline segments. Suitable material consists of soil, free of large rocks, boulders, tree stumps and / or construction debris and waste. If necessary, sand padding will be used to provide additional protection for the pipeline. In areas where excavated material is unsuitable for backfilling, additional select fill may be required. This material will be obtained from commercial borrow areas in the region. If the soil is rocky, padding material (soil free of rocks and debris) is generally placed immediately around the pipe. In some situations it may be necessary to use a padding machine that will remove stones and debris from soil prior to use as backfill or padding material.

Padding material in excessively rocky soils is generally placed in the trench by backhoes or padding machines. Following padding, backfilling is generally completed using bulldozers. The top of the trench may be slightly crowned to compensate for settling. In locations where topsoil and subsoil has been segregated, the subsoil will be used for backfilling. The topsoil will then be spread across the graded construction ROW. Following backfilling and final grading, the ROW will be inspected for compaction and scarified as necessary. The soil is then seeded and mulched with appropriate grass seed mixtures according to standards and specifications based on U.S. Department of Agriculture and Natural Resource Conservation Service recommendations.

Hydrostatic Testing

After cleaning, the pipeline will be hydrostatically tested (with water) to insure its integrity for the intended service and operating pressures. The water used in the test procedure is normally obtained from water sources crossed by the pipeline, including available municipal supply lines.

A bi-directional "pig" is placed in the pipeline and the water is pumped in behind. Pigs vary in type depending on use but may include brush or sponge pigs. Pigs are cylindrically shaped devices, typically constructed of polystyrene foam or polyethylene. Brush pigs have hardened steel bristles mounted on the exterior over the solid poly core. Foam pigs have no exterior coating over their solid foam body.

Pigs are generally introduced into the long pipeline sections to be tested through manifold structures. These manifold structures are typically installed on either end of the pipeline section that is being tested. Pigs are generally propelled through the pipeline using compressed air. The placement of the pig in the pipeline prior to filling insures proper and complete filling of the pipe with water. Test pressure is obtained by placing pressure on the water in the pipeline with a high-pressure pump. At the completion of the test, the test pressure is reduced and the water is removed from the pipeline by propelling a pig with air behind the water in the pipe. This action forces the water from the pipeline at pre-determined locations.

Pipeline Cleaning

Once the pipeline tie-ins are completed, the pipeline is cleaned internally with additional pigs. While being propelled through a pipeline, pipeline pigs effectively remove any dirt,

water, or debris left in the pipeline during construction and installation. Additional pig runs are made, if necessary, to remove any residual water from the pipeline.

Restoration and Re-vegetation

The cleanup crew completes restoration and re-vegetation of the ROW and temporary construction workspace. Efforts will be made, weather and soil conditions permitting, to complete final cleanup (including final grading) and installation of permanent erosion control measures within 10 days of the backfilling operation. All cleanup activities including re-vegetation will be completed in accordance with the EM&CS&P and/or any permit or certificate conditions identifying specific seeding or re-vegetation methods. Within temporary construction areas on private property, turf, ornamental shrubs, and other landscaping materials will be restored in accordance with landowner agreements. In situations where it will not be possible to permanently seed disturbed areas or bare soil prior to the close of the permanent seeding season, said areas will be mulched in accordance with the EM&CS&P. Pending weather and soil conditions, seeding will be completed within 6 working days of the final grading.

In the event that final cleanup must be deferred more than 10 days after the trench is backfilled, all such areas will be mulched. At slopes adjacent to wetlands and streams, the application of mulch will be increased to 3 tons / acre of hay or straw, or its equivalent, for a minimum of 50 feet on each side of the wetland or stream. (Depending on site-specific conditions, greater than 50 feet may need to be so protected.) Jute thatching or bonded fiber blankets will be used instead of straw or hay on the restored banks of waterbodies to provide enhanced stabilization.

Restored or re-seeded areas should exhibit 85% or better vegetative cover after two complete growing seasons. Visual inspections will be conducted at the end of the first and second growing seasons after restoration measures have been completed to determine the success of re-vegetation. If vegetation cover fails to meet these criteria, PowerCo will take additional steps as necessary to obtain acceptable cover.

4.3.1.2 Stove Pipe Construction Methods

Because a majority of the pipeline will be constructed along the outer edge of the Route 9J ROW, the "stove pipe" or sewer line method of pipeline construction may be used in that location. This method is typically used when a pipeline is installed in an "area restricted" location. This technique typically involves installing the pipeline one pipe section at a time. Associated pipeline installation steps such as welding, radiography, and coating activities are all performed in a limited length of open trench ranging from 100 to 1,000 feet long. At the end of each day, newly installed pipe is backfilled. If at the end of the day pipeline construction is not complete along the section that is being worked on, the open trench is protected for safety purposes. In general, on a daily basis the length of new excavation equals the length of pipeline installed and backfilled.

The stove pipe method also allows work to occur across a "limited width" construction corridor. Because the pipeline is being constructed in a section-by-section manner, sections of pipeline are generally trucked to the construction area, as they are needed. This eliminates the need for storing pipe and completing assembly along an area adjacent and parallel to open trench, which is typical in "cross-country" pipeline construction.

Stove pipe pipeline construction generally occurs in a sequential manner. Prior to actual construction, underground utilities will be identified, located, and clearly marked along the

entire length of the pipeline corridor. Following this initial step, the construction area is prepared. If the actual construction location is along an unpaved section parallel to the roadway, the area will be cleared of vegetation as necessary. Erosion and sedimentation control measures will then be installed along sensitive areas such as wetlands or steep areas prone to erosion. Grading to achieve a level work area will then proceed if the location is not level. Once these tasks have been completed, the pipeline trench is excavated. Soil from the excavated trench will be placed parallel to the trench along the non-working side. In some situations where site-specific conditions restrict the work area, excavated soil will be loaded into a dump truck and temporarily removed from the immediate vicinity of the work area. When a sufficient length of trench has been excavated to an adequate depth, pipe sections will then be brought to the work location and carefully lowered into the trench by a backhoe / boom truck. Once lowered into the trench, pipeline sections are then welded together. Following the completion of each weld, it is inspected using radiographic methods. If the weld does not pass inspection standards, it is either repaired or replaced. When the weld is ultimately approved, exposed sections of pipeline that are not coated will be coated. All coatings are then inspected for integrity and repaired as required.

Upon completion of the welding and coating processes, soil that was excavated from the trench is used to backfill the trench provided that it is free of stones and meets other standards set forth in the EM&CS&P. Areas that have been disturbed during construction will be re-vegetated using acceptable seed mixes and methods.

4.3.2 Specialized Construction Techniques

4.3.2.1 Residential Areas

PowerCo will work to ensure that construction activities are implemented in a manner that minimizes potential impacts and inconvenience to residents. As a partial means to achieve this, the duration and length of open trench will be minimized to the extent possible. The proposed pipeline will come within 150 feet of approximately 7 dwellings. The proposed route avoids any densely populated residential areas. Property boundaries, fences, walls and hedgerows that will be crossed by the pipeline are indicated on the construction drawings that have been provided along with this Application.

Following clearing and grading activities, construction safety fencing will be placed at the edge of the construction ROW where residences or their entrance driveways occur within 100 feet of the work area. Exceptions may be necessary, where the installation of such fencing is not practical such as near existing roads or stream crossings that must remain unobstructed. In other areas, safety fencing may be erected where it is necessary to keep unauthorized individuals off the construction ROW as per existing agreements with adjacent landowners. In residential areas, once the pipeline has been lowered in the trench, the section will be backfilled immediately.

As standard practice, property owners will be notified prior to any disruption of utility service. Any interruption of such services will be minimized to the extent practical. PowerCo will make representatives of local utility companies aware of construction schedules and will ask that representatives of these companies be on site during construction.

Topsoil from landscaped residential areas that are located in the temporary construction workspace will be segregated if possible. In the event that segregation is not feasible, topsoil will be imported. Immediately after backfilling, residential areas will be restored and all construction debris will be removed. Compaction testing will be performed and soil compaction mitigation will be performed in severely compacted areas. PowerCo does not anticipate impacting any lawns; nevertheless, if any landscaped areas are impacted by construction of the pipeline, they will be raked, topsoil added, seeded and landscaped as necessary, per landowner agreements. Fences, mailboxes and other structures that have been removed will be restored. Sidewalks, driveways and roads will be restored as soon as practical. After restoration, a representative of PowerCo or its construction contractor will contact landowners to ensure that conditions of all agreements have been met.

4.3.2.2 Road Crossings

Construction across roadways involves a carefully planned operation and often requires additional workspace. Therefore, the construction process at road crossings is described to support the need for additional workspace where proposed.

Where the pipeline is to be constructed within or across public and private roadways, the development of specific construction plans for each roadway and/or crossing will be required. State roadway opening permits will be obtained as required. Permit conditions will dictate day-to-day construction activities at road crossings.

As noted earlier, prior to construction, the Dig Safely New York One Call Notification Center will be contacted and all utilities marked along project area roadways. Where there is a question as to the location of utilities such as water, cable, gas, and sewer lines, they will be located by field instrumentation and test pits.

Construction will be scheduled for work within roadways and specific crossings to avoid commuter traffic and schedules for school buses to the greatest extent practical. Appropriate signs will be displayed and necessary safety measures will be developed in compliance with state permits for work in the public ROW. Arrangements will be made with the appropriate jurisdictional agency to have traffic safety personnel on hand during periods of construction. Provisions appropriate to the location and time of construction will be made to permit continued traffic flow in the construction area.

Construction may occur using the stove pipe method along area roadways. This will allow traffic to flow around the construction work area, and reduce impacts to area residents.

Expanded workspace at road crossings is anticipated to be approximately 50 feet of additional width for a length of 100 feet on either side of two-lane roads.

Crossings of individual driveways and private roadways will be coordinated with residents to minimize access impacts. In those areas where the excavation of a longer length of trench will not pose a safety problem the pipeline will be installed using the cross-country trench method. Trenches will be protected for safety purposes as required by Federal and state construction standards. Steel plates will be available at all times so that a temporary platform can be made across the trench should the need arise (e.g., emergency vehicles). At least one lane of traffic will be kept open when constructing on or across residential streets. Traffic lanes and home access will be maintained except for temporary periods essential for laying pipeline. PowerCo will implement appropriate site-specific work zone traffic control patterns in accordance with its standard procedures adopted from the 1993 version of the United States Department of Transportation Manual.

All roadway surfaces will be quickly restored to the specifications of the local or state Department of Public Works.

For the major roadway crossing, (*i.e.*, Route 9J) directional drilling procedures may be utilized to avoid impacts to the transportation system. Directional drilling procedures will be coordinated with and approved by applicable highway officials. Directional drilling entails drilling a small-diameter pilot hole below travel arteries then enlarging the pilot hole to allow for the prefabricated pipeline to be pulled back through it.

The pilot hole is drilled using a non-rotating drill bit consisting of an asymmetric jetting head. The hydraulic cutting action of the drill head is remotely operated to control its orientation. The position of the drill bit is electronically monitored during the drilling operation. Bentonite drilling fluid is delivered to the cutting head through the drill string to provide the hydraulic cutting action, and to remove cutting spoil as the drilling fluid returns to the entry point of the pilot hole. The bentonite clay is processed to remove the cuttings and the bentonite is recycled for use as the drilling operation continues.

Enlarging the pilot hole is accomplished with reaming passes until the chamber is larger than the proposed 16-inch pipeline diameter. A rotating reaming / cutting tool is attached to the drill string at the exit point and drawn back toward the drilling rig situated at the entry point of the pilot hole. Drill pipe is added behind the reaming tool as it progresses toward the drill rig to ensure that a continuous drill string is maintained in the drilled hole. Enlarging of the hole is an incremental process using increasingly larger diameter reaming tools until the desired hole diameter is achieved. The prefabricated pipeline is then attached to the drill string at the exit point and drawn back toward the drilling rig.

Bentonite mud and spoil will be contained and removed and disposed of at an appropriate disposal facility.

Directional drilling will require a staging area on each side of the roadway that is to be drilled to house the drilling rig and associated equipment and materials used in the drilling process as well as the prefabricated pipeline to be drawn through the resultant drill hole. This staging area will require a minimum workspace footprint of 100 feet wide by 100 feet long.

4.3.2.3 Railroad Crossings

The Applicant will obtain all necessary permits and approvals for the railroad crossing on the proposed route. Only one railroad crossing, the crossing of the CSX rail line near the municipal border between the Town of East Greenbush and the City of Rensselaer, is needed for the Facility. The crossing of the CSX rail line will likely be a continuation of the directional drilling under Route 9J as discussed in the previous section.

4.3.2.4 Rock Removal and Blasting

Rock encountered during trenching will be removed using one of the following techniques:

- conventional excavation with a backhoe;
- ripping with a bulldozer followed by backhoe excavation;
- hammering with a pointed backhoe attachment followed by backhoe excavation;
- blasting followed by backhoe excavation; or
- blasting surface rock prior to excavation.

The technique selected is dependent on relative hardness, fracture susceptibility, expected volume and location.

Should blasting be required, it will be performed according to strict guidelines designed to control energy release. Proper safeguards will be taken to protect personnel and property. Charges will be kept to the minimum to break up the rock. Mats made of heavy steel mesh or other material are effective means of preventing scattering of rock and debris and will be used as necessary. Blasting activities will strictly adhere to all state and federal regulations that apply to controlled blasting and blast vibration limits with regard to structures and underground utilities.

4.3.2.5 Wetland Construction Procedures

Construction across wetlands will be performed in accordance with the EM&CS&P. These construction methods are intended to reduce potential impacts and will minimize the time of construction equipment activity in wetland areas. During ROW clearing, woody vegetation will be cut at ground level, leaving root systems intact. Only stumps and root systems directly over the trench will be removed where required for pipe installation. Implementing this construction procedure will encourage re-vegetation of the ROW following construction. When wetland soils are saturated, the pipeline trench will be excavated across the wetland by equipment supported on wooden swamp mats or by tracked equipment to minimize the disturbance to wetland soils. Unless soils are saturated, the top 12 inches of wetland soil over the trench line will be segregated. Trench spoil will be temporarily piled in a ridge along the pipeline trench. Gaps in the spoil pile will be left at appropriate intervals to provide for natural circulation or drainage of water within the wetland. While the trench is dug, the pipeline will be assembled in a staging area located

in an upland area. After the pipeline is lowered into the trench, wide-track bulldozers or backhoes supported on swamp mats, as appropriate, will be used for backfill, final cleanup, and grading. This construction method will minimize the amount of equipment and travel in wetland areas. If dry conditions exist within the wetland, the pipe fabrication will occur in the wetland and normal cross-country or stove pipe construction practice will be used. A complete description of construction methods can be found in the EM&CS&P.

Potential impacts to water quality will be avoided while work is being performed in wetlands and other bodies of water by implementing the following measures:

- Construction materials, fuels, etc. will not be stored within wetlands or within 50 feet of any stream or wetland system, except under limited, highly controlled circumstances and under direct supervision of the environmental inspector.

- Construction equipment will not be re-fueled within wetlands or within 50 feet of any stream or wetland system, except under limited, highly controlled circumstances and under direct supervision of the environmental inspector.

- Construction equipment will not be washed in any wetland or watercourse.

4.3.2.6 Waterbody Construction

The following information describes conventional construction procedures that will be followed during pipeline installation to protect surface water resources along the Proposed Natural Gas Pipeline route.

Construction within perennial waterbodies will be completed as an independent construction operation, separate from work on the remainder of the construction ROW.

This will permit the scheduling of crews and equipment to capitalize on favorable weather conditions, expedite construction within streams and wetland systems, and minimize potential sedimentation impacts. Construction procedures may vary depending on the nature and size of the waterbody. In general, all water bodies that will be crossed by the pipeline are no greater than 20 feet in width.

Unless expressly permitted or further restricted by the appropriate federal or state agency on a site-specific basis, crossings will be constructed during the following time windows:

- Coldwater Fisheries - June I through September 30; and
- Coolwater and Warmwater Fisheries - June I through November 30.

Table 4.7-1 in Section 4.7 of this Application identifies the crossing methods proposed at each waterbody.

Streams that are approximately 10 feet in width are generally crossed using the open-cut, wet-ditch construction method. In the construction ROW, excavated material will be placed at least 10 feet from the stream bank within a stockpile area surrounded by sediment filter devices to prevent siltation of the adjacent resource area. In addition to typical waterbody crossing procedures, in-stream sediment control devices may be used. These devices include, but are not limited to, rock bags, silt curtains, and hay bale filters. Depending on site conditions at the time of the crossing, specific permit requirements, and at the discretion of the environmental inspector for PowerCo's construction contractor, the device(s) used and installation specifications will be determined. Site-specific conditions may dictate that the open-cut, dry-ditch method of crossing utilizing flume pipes be employed.

The open-cut, dry-ditch method of construction using flume pipe(s) will be employed for waterbody crossings up to approximately 10 feet wide, which are designated coldwater or significant warmwater fisheries by state management agencies. The open-cut, dry-ditch method will generally use a flume pipe to transport the stream across the disturbed area and allow trenching activities to be undertaken in drier conditions. The flume pipe(s) installed across the trench will be sized to accommodate anticipated stream flows. Flume pipes are generally not recommended for use on a watercourse with a broad unconfined channel, unstable banks, excessively soft substrates, excessive stream flow, or where the installation and construction of the flumed crossing will adversely affect either upstream or downstream portions of the bed or banks of the stream. Following installation of the pipeline segment across the waterbody, the trench will be backfilled, the stream channel stabilized, the flume pipe removed, and the area restored. All in-stream construction activities will be completed within 24 hours (not including blasting). Unless otherwise directed by the environmental inspector, waterbody banks are generally restored prior to restoring normal flow to the waterbody channel.

Only the equipment necessary for in-stream excavation and backfilling will be allowed in the stream channel. All other construction equipment will cross the stream on equipment crossings or access the opposite side of the stream via other access options. Equipment crossings will consist of one of the following:

- clean rockfill and culverts;
- equipment pads and / or culverts; or
- flexi-float or portable bridge.

An alternative method of dry-ditch construction across waterbodies 10 feet or less in width that are not designated as significant fisheries may be accomplished by utilizing pumps to transport the stream across the proposed trench line (dam and pump). This method involves placing sand bags across the existing stream channel upstream from the proposed crossing to stop water flow, and downstream from the crossing to isolate the work area. Pumps will be used to pump the water across the disturbed area and back into the stream further downstream. Care will be taken to control the pumping rate to match existing downstream flow rates. Screens will be used at the inlet hose to prevent the entrapment of aquatic life. Care will be taken to ensure that discharge from the outlet pipe does not scour the stream bottom. Spare pumps will be on-site in the event of a pump failure. Following construction, the equipment crossing sandbag dams will be removed and the area restored. This method of construction will be used only in areas that can be crossed in one day. Pumps will be monitored at all times until the construction is completed.

For waterbody crossings (10 feet or less in width) not considered significant fisheries that do not utilize flume pipes or the dam and pump method, in-stream construction (not including blasting) will be completed within 24 hours. Unless otherwise directed by the environmental inspector, waterbody banks are generally restored prior to restoring normal flow to the waterbody channel.

4.3.3 Miscellaneous Construction Issues

4.3.3.1 Access Roads

Construction work areas for the Proposed Natural Gas Pipeline will be accessed primarily from the Route 9J ROW. Access to the southern end of the pipeline (from the new gate station to the Route 9J ROW) and the northern portion of the pipeline that will lie west of

the CSX rail line will be provided by way of temporary and permanent access roads as well as existing roads wherever practicable. Temporary access road will likely be constructed to access the pipe storage / marshalling yard. All proposed access roads have been indicated on the construction drawings that have been provided to the NYSPSC along with this Application. If an existing State roadway is used for access purposes, PowerCo or its construction contractor will notify the appropriate agency or authority of its intent to haul large and oversized loads over the public way. All required state highway permits will be obtained.

Although not anticipated, if access across a water resource is required, an improved crossing structure or device will be used as necessary. These may include equipment bridges, culverts, matting or corduroy roads. In gaining such access, all existing drains, culverts, drainage control features and drainage patterns will be maintained during construction. In addition, all existing access roads and gates that may be used by PowerCo's construction contractor during the construction of the Proposed Natural Gas Pipeline will be restored to pre-construction conditions. Erosion and sedimentation control protection measures will be installed and maintained at the limits of access roads where necessary to prevent the migration of silt into wetlands and other water resources.

4.3.3.2 Pipe and Contractor Yard

One storage yard for pipe and associated equipment will be required for construction of the proposed Facility. The pipe storage yard will need to be a clear, level site, approximately 20 acres in size. The pipe storage yard location will be determined by examination of existing level vacant clearings with easy access to the proposed route. One contractor (marshalling) yard will also be required for the project. The marshalling yard will be

located within the 20-acre pipe storage yard. The contractor yard will be required for storage of equipment, fuel and temporary office trailers for coordination of construction activities. Strategic location of these facilities will allow for an efficient construction process minimizing the duration of construction activities and disruptions at any given location along the route. One potential location for the pipe storage / marshalling yard has been identified on the construction plans that have been provided with this Application.

PowerCo will investigate other potential locations for the pipe storage / marshalling yard should any be identified. A prime objective in this regard is to utilize currently disturbed sites to avoid additional tree clearing and possible wetland impacts.

Appropriate erosion controls will be used at the limits of pipe and contractor yards as necessary to prevent the migration of silt into wetlands, water resources or other sensitive areas. Disturbed areas within pipe and contractor yards will be restored and re-vegetated based on private landowner agreements.

4.3.3.3 Storage of Fuels and Lubricants

The storage of fuels and lubricants will be the responsibility of PowerCo's construction contractor. All refueling and equipment maintenance activities shall be performed in accordance with a Spill Prevention Control and Countermeasure ("SPCC") Plan, to be prepared by the construction contractor. At this time, it is not feasible to identify where the contractor will store the fuels or lubricants necessary for the operation of the required construction machinery. All construction solid waste material will be transported to approved public or private waste disposal sites nearest to the areas of construction.

4.3.3.4 Environmental Training for Construction

As required by the EM&CS&P, environmental training will be given to both PowerCo and contractor personnel whose activities may impact the environment during pipeline construction. The level of training will be commensurate with the type of duties of the personnel. All construction personnel from the chief inspector, environmental inspector, craft inspectors, contractor job superintendent to loggers, welders, equipment operators, and laborers will be given environmental training. The training will be given prior to the start of construction and throughout the construction process, as needed. The training program will cover pertinent standards, job-specific permit conditions, PowerCo and contractor company policies, cultural resource procedures, threatened and endangered species restrictions, SPCC Plan, State Pollutant Discharge Elimination System ("SPDES") Stormwater Plan, and any other pertinent information related to the job. In addition to the environmental inspector, all other construction personnel are expected to play an important role in maintaining strict conformance with environmental policy and the EM&CS&P for environmental management and construction of natural gas transmission facilities.

4.3.3.5 Environmental Monitoring During Construction

The gas pipeline construction contractor will be required to direct all employees to install, maintain and restore any necessary environmental protection measures at any time during the project. The environmental inspector or his / her designee will also have authority to stop work and direct appropriate measures to be taken to ensure environmental integrity and permit compliance.

4.3.3.6 Construction Workforce and Schedule

Construction is anticipated to take approximately 16-24 weeks from initial clearing through ROW restoration, however, landscaping within residential areas may take as much as 4 to 6 weeks additional time to complete beyond the normal restoration. Should the project be constructed in winter, restoration activities would be delayed until spring, however, winterization controls would be installed as needed to prevent erosion.

4.3.3.7 Additional Work / Staging Areas

The typical construction ROW width will be 30 to 50 feet along Route 9J and 75 feet along the new ROW located along the northern portion of the proposed pipeline route. The construction ROW may need to be expanded in certain locations based on environmental conditions. These include additional work or staging areas at road, railroad, waterbody and wetland crossings; in areas of side slopes; where blasting is required and / or bedrock is near the surface; or at the beginning and end of each pipeline segment for contractor mobilization / demobilization. The types of areas where extra work space / staging areas may be required along the proposed route are described below.

Topographic Conditions

An additional 15 feet is proposed for the working side (65-foot working side coupled with 25 feet non-working side) when the following conditions are met:

- Mild side slope (approximately 3% to 7% side slope); and
- Extra depth ditch required.

Shallow Bedrock Areas

In areas of shallow bedrock, additional temporary workspace will be required for storage of the blast rock. The blast rock cannot be used as backfill around the pipe due to the potential for damaging the pipe coating and welded surfaces. The contractor shall remove the blast rock from the ROW and dispose at an appropriate off-site location. This may require an additional 15 feet of width for the construction ROW.

Severe Side Slopes

PowerCo does not anticipate construction in any severe side slopes along the proposed pipeline (see Figure 4-7). It is expected that construction along the one area of the proposed route that contains steep slopes will avoid the slopes by placement of the proposed Facility near the toe of the slope. Construction methods for steep slopes will be performed in accordance with the EM&CS&P.

Agricultural Areas

PowerCo does not anticipate construction in any agricultural areas along the proposed pipeline.

Wetland and Waterbody Areas

A staging area may be needed adjacent to specific wetlands to facilitate the pipeline crossing. The staging areas are in addition to the typical construction ROW and will be used for the assembly and fabrication of the pipe section that will cross the wetland area. This work area will be located at least 50 feet away from the wetland edge, topographic conditions permitting. If topographic conditions do not permit a 50-foot setback, these

areas will be located at least 10 feet away from the wetland. Typically, the additional work area will be 50 feet wide by 100 feet long and will occur on both sides of the wetland for wetland areas up to 500 feet in length. Larger spaces may be required for more extensive wetland areas. In no event will vegetation be cleared between the staging areas and the wetland. The work area will be limited in size to the minimum necessary to safely construct the wetland crossing. Locating the work area in this manner will minimize impacts to wetlands.

To facilitate pipeline construction across waterbodies, an additional staging area (work area) may be needed adjacent to the waterbody to assemble and fabricate the length of pipe necessary to complete the crossing. This work area is in addition to the normal construction ROW and will be located at least 50 feet away from the stream bank, topographic conditions permitting. If topographic conditions do not permit a 50-foot setback, then these areas will be located at least 10 feet away from the water's edge. In no event will vegetation be cleared between the staging area and the waterbody. The work area will be limited in size to the minimum area necessary to safely construct the waterbody crossing and accommodate any stockpile of excavated material from the trench and the prefabricated pipeline crossing section. Typically, for minor and intermediate stream crossings, the additional work area will be 50 feet wide by 100 feet long on either side of the waterbody starting at the edge of the 50-foot setback.

Additional Areas

Additional temporary ROW workspace will be required at the start of the new pipeline. The maximum additional temporary ROW width will be less than 200 feet wide and 500

feet in length. This additional temporary workspace is required for the new Gate Station construction.

4.4 Operation and Maintenance Procedures

The Proposed Natural Gas Pipeline will be operated by PowerCo, either directly or through the services of a qualified engineering contractor, consistent with all permit conditions and in accordance with all applicable regulations, standards and procedures for natural gas pipelines that have been promulgated and approved by the NYSPSC staff.

The proposed pipeline will be operated and maintained in a manner such that pipeline integrity is maintained to ensure that a safe, continuous supply of natural gas reaches its destination. Routine maintenance will include regularly scheduled gas-leak surveys, periodic air and foot patrols, regularly scheduled cathodic protection monitoring and ROW vegetation management. All fence posts, signs, marker posts, aerial markers and decals will be painted or replaced as required to ensure that the pipeline locations will be visible from the air and ground. Additional maintenance functions will include terrace repair, backfill replacement, drain tile repair and periodic inspection of water crossings. PowerCo or its construction contractor will maintain a supply of emergency pipe, leak repair clamps, sleeves and other equipment needed for repair activities that may be required as a result of routine inspections.

4.4.1 Cleared Areas

Most of the proposed route will be within existing New York State Department of Transportation ("NYSDOT") State Highway ROW. For the Proposed Natural Gas Pipeline, a

pipeline ROW of 20-feet in width will be maintained free of woody vegetation within upland areas, wetlands and riparian zones. The ROW will be cleared for construction and then permanently maintained free of woody vegetation, typically for 10 feet on either side of the centerline of the pipeline. Maintaining a cleared ROW is necessary for the following reasons:

- access for routine pipeline patrols and corrosion surveys;
- access in the event that emergency repairs of the pipeline are needed; and
- visibility during aerial patrols.

A ROW Vegetation Management Plan is subject to NYSPSC approval separate from this Application.

4.4.2 Erosion Control

A set of standards and procedures are contained in the EM&CS&P plan to prevent or minimize sediment and erosion damage. Erosion problems on the pipeline ROW will be reported to the local gas operations supervisor. These reports may originate from landowners or PowerCo or PowerCo's engineering contractor personnel performing routine patrols. Corrective measures will be performed as needed. PowerCo believes that the Article VII process, associated EM&CS&Ps and contract specifications for the Proposed Natural Gas Pipeline fulfill the requirements of a Storm Water Pollution Prevention Plan ("SWPPP") that would otherwise be required for such projects that disturb over one acre of soils.

4.4.3 Periodic Pipeline and ROW Patrols

During these surveys, all permanent erosion control devices installed during construction will be inspected to assure that they are functioning properly. In addition, attention will be given to:

- evidence of third-party activity and potential pipeline damage;
- serious erosion and wash-outs along the ROW;
- water control devices such as diversion ditches;
- condition of banks at stream and river crossings;
- fallen timber or other threats to the pipeline;
- shrubs and other vegetation planted during construction; and
- any other conditions that could endanger the pipeline.

The local gas operations supervisor will be notified of any conditions that need attention and corrective measures will be performed as needed.

4.5 Land Use

4.5.1 Overview

The following overview of land uses in the area of the Proposed Natural Gas Pipeline project reflects information gathered from state, local, and federal agencies, as well as field investigation and literature research. This information is intended to serve as a baseline for land usage in the vicinity of the proposed project.

A classification system was created to describe the land use and cover types that exist in the area of the proposed project. This classification system consists of nine general categories: agriculture, commercial land, forested land, industrial land, open fields, residential land, water bodies, roadways, and wetlands. Other than wetlands, which were exclusively delineated in the field, the coverage of each category was determined through a combination of the inspection of aerial orthophotographs and field investigations. Figure 4-2 depicts the various land use types, except for wetlands. Wetlands are designated on Figure 4-6.

This classification system was further revised to reflect the final alignment of the proposed Facility that will be sited primarily along an existing highway ROW. This revised classification system consists of three land use types: transportation corridor (which is located within what otherwise would be residential / agricultural land use areas), commercial / industrial and business; and three cover types: forested, herbaceous / shrubby, and wetlands. Wetlands are further divided into emergent / scrub-shrub and forested wetlands.

4.5.2 Pipeline Facilities

In general, the construction area for the project will vary up to a maximum width of 150 feet depending on site-specific conditions. In areas where the proposed line will cross under major roadways or other areas with specific construction needs such as wetlands and water bodies, up to an additional 75 feet of temporary workspace may be required on either side of the crossing.

Existing land usage and approximate distance crossed of each land use category affected by the construction of the proposed pipeline are presented in Table 4.5-1.

Table 4.5-1 Linear Miles by Land Use / Cover Type Category

A. Land Use

Town / City	Transportation Corridor *		Commercial / Industrial		Business		Total Miles
	Miles	%	Miles	%	Miles	%	
Schodack	1.2	26.7	0	0	0	0	1.2
East Greenbush	2.5	60.0	0.2	4.4	0	0	2.7
Rensselaer	0	0	0.6	8.9	0	0	0.6
Total	**3.9**	**86.7**	**0.6**	**13.3**	**0**	**0**	**4.5**

NOTE: Percentages are based on the total length of the route (4.5 miles).

- The Transportation Corridor is located within Residential / Agricultural land use areas.

B. Cover Type

Town / City	Forested		Herbaceous / Shrubby		Emergent / Scrub Shrub Wetlands		Forested Wetlands		Total Miles
Miles / %	Miles	%	Miles	%	Miles	%	Miles	%	
Schodack	0	0	0.7	16	0.5	11	0	0	1.2
East Greenbush	<0.1	<1	2.0	44	0.9	20	<0.1	<1	2.9
Rensselaer	0.2	4	0	0	0	0	0.2	4	0.4
Total	**0.2**	**4**	**2.7**	**60**	**1.4**	**31**	**0.2**	**4**	**4.5**

NOTE: Percentages are based on the total length of the route (4.5 miles).

The Proposed Natural Gas Pipeline will primarily use existing highway ROW during operation and for maintenance. New permanent ROW or easements will be required as specified within Exhibit 2, Facility Description. Mitigation measures that may be utilized to minimize the effect of the proposed project on various land use classifications include:

- Limitation of construction hours in vicinity of residential, commercial and industrial areas;
- Timing of construction during low use or low impact periods; and

- Re-vegetation of temporary construction ROW.

Acreage affected, including temporary and permanent conversion of land use types, by the construction of the new pipeline facilities is included in Table 4.5-2.

Table 4.5-2 Acreage by Land Use / Cover Type Category

A. Land Use

Town / City	Transportation Corridor*		Commercial / Industrial	
	Temp	Perm	Temp	Perm
Schodack	4.4	2.9	0	0
East Greenbush	10.5	7.0	0.7	0.4
Rensselaer	0	0	2.7	1.0
Total	**14.9**	**9.9**	**3.4**	**1.4**

Note: All values are approximate.

* The Transportation Corridor is located within Residential / Agricultural land use areas.

B. Cover Type

Town / City	Forested		Herbaceous / Shrubby Area		Emergent / Scrub Shrub Wetlands		Forested Wetlands	
	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
Schodack	<0.02	0.11	2.5	1.7	1.6	0	0	0
East Greenbush	0.0	0.17	7.3	4.8	5.64	0	0.19	0.07
Rensselaer	1.2	0.5	0	0	0.44	0	0.57	0.29
Total	**1.2**	**0.78**	**9.8**	**6.5**	**7.68**	**0**	**0.76**	**0.38**

NOTE: All values are approximate.

Assumes a 20-foot permanent easement (up to 30 feet may be required in some locations due to existing underground utilities) within a 75-foot construction ROW along new easements and a 50-foot construction corridor along the Route 9J ROW.

Table 4.5-3 provides an estimation of the forest area to be cleared for construction and operation of the proposed pipeline. These calculations are based on ROW dimensions presented in Exhibit 2, Facility Description.

Table 4.5-3 Estimated Clearing of Forest

Town / City	Upland Forest to be Cleared		Forested Wetland to be Cleared	
	Temporary (acres)	Permanent (acres)	Temporary (acres)	Permanent (acres)
Schodack	<0.02	0.11	0.0	0.0
East Greenbush	0.0	0.17	0.19	0.07
Rensselaer	1.2	0.5	0.57	0.29
Total	**1.2**	**0.78**	**0.76**	**0.38**

Table 4.5-4 Acreage Affected by Aboveground Facilities

Facility	Town / City	Construction Requirements (acres)	New Land Requirements (acres)	Present Land Use
New Gate Station	Schodack	±2	1	Residential-Agricultural (Vacant)
New valve Station	East Greenbush	<0.01	<0.01	Roadway
GLM Station	Rensselaer	0.33	0.33	Industrial
Total		2.34	1.34	

The aboveground facilities associated with the Proposed Natural Gas Pipeline include the connection at the new gate station, one valve site[1] and the new GLM station that will be constructed at the BEDCO Power Plant site. The proposed location of the new gate station

[1] As noted in Exhibit 2, a second valve site might be required near the crossing of the CSX rail line.

will require the clearing of land both for the gate station and the pipeline section that will exit the gate station and proceed toward Route 9J. Detailed site work has not been completed but it appears that few trees will need to be removed for this gate station and the pipeline section that will proceed toward Route 9J. As currently proposed, no trees should be impacted by the pipeline segment that runs from the TGP No. 200 pipeline to the new gate station as this pipeline will either be bored or directionally drilled. Should this segment be installed using standard cross-country installation methods, however, some trees would need to be removed.

The land requirements for the GLM station on the BEDCO Power Plant site include a 70-feet by 200-feet fenced area that will be constructed as a component of the proposed BEDCO Power Plant that is being permitted by BEDCO in its Article X Application. Accordingly, no additional tree removal or clearing should be required by PowerCo for this aboveground facility. Similarly, the valve site, which will be located near the mid-point of the Proposed Natural Gas Pipeline, is not expected to require additional tree removal or clearing.[2]

4.5.3 Facility Abandonment / Replacement

The Proposed Natural Gas Pipeline is being constructed to serve a specific end user, BEDCO, to provide natural gas for the BEDCO Power Plant. No abandonment or replacement of facilities is included within the scope of this project.

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2 Should a second valve site be required near the CSX rail line crossing, it would likely be placed within the same area used for the bore pit or receiving pits and would require no additional tree removal.

4.5.4 Residential Areas

4.5.4.1 Existing Residences

No existing homes or businesses will be displaced by construction of the proposed Facility. Impacts to existing homes will be minimized by employing construction techniques specialized for residential areas. These techniques are detailed in the EM&CS&P.

4.5.4.2 Proposed Residences

At the time of the filing of this Application, there were no proposed residences approved to be built within 50 feet of the construction work-space for the Proposed Natural Gas Pipeline.

4.5.5 Public Land, Recreation, and Other Designated Areas

There are no state wild and scenic rivers, remnant prairies, designated natural or scenic areas, or registered natural landmarks within a half-mile radius of the Proposed Natural Gas Pipeline alignment. There are no trees in the area of the proposed Facility listed on the Registry of Big Trees in New York State (Sanford, 2002). A major portion of the Proposed Natural Gas Pipeline is located adjacent to the Papscanee Marsh and Creek / Papscanee Island Nature Preserve ("Papscanee"), a designated Significant Coastal Fish and Wildlife Habitat under New York State's Coastal Management Program (Hogan, 2002), although the Papscanee is located on the western side of Route 9J and the Proposed Natural Gas Pipeline is primarily on the eastern side in the vicinity of the Papscanee. A demonstration of consistency with Coastal Management Program policies is provided in Section 4.5.6. The Proposed Natural Gas Pipeline will not affect any visually sensitive areas.

Observations from field surveys and information from the DeLorme Street Atlas 2003 were used to determine community features such as schools, churches, hospitals, and emergency services falling within a one-mile corridor (half-mile on either side) of the Proposed Natural Gas Pipeline. Three features were located in East Greenbush east of Route 9J: two churches and the Rensselaer County Search and Rescue. Rensselaer County Search and Rescue is a non-profit organization formed to assist law enforcement agencies in locating and recovering lost or missing persons. Access or use of these facilities will not be impacted by the construction or operation of the Proposed Natural Gas Pipeline. No community features were located within the one-mile corridor in the Town of Schodack or the City of Rensselaer.

4.5.6 Coastal Zone Management

The Proposed Natural Gas Pipeline route is located in the designated Coastal Zone of the Hudson River. The New York Department of State reviews all projects proposed in the coastal zone for consistency with the state's costal zone policies. Local communities may develop their own Local Waterfront Revitalization Plan ("LWRP") to encourage appropriate uses within the coastal zone. The City of Rensselaer has developed a LWRP as its primary plan for regulating use and development of its waterfront. The Proposed Natural Gas Pipeline as proposed is consistent with all local and state policies that are applicable to the Facility. Table 4.5-5 lists these policies and identifies whether the policy is applicable to the Facility and how the Facility is consistent with the policy.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies

Policy Number	Description	Consistency
Policy 1	Restore, revitalize, and redevelop deteriorated and under utilized waterfront areas for commercial and industrial, cultural, recreational and other compatible uses.	Consistent. The Proposed Natural Gas Pipeline will be located in an area zoned for heavy industrial use within the City of Rensselaer. The Proposed Natural Gas Pipeline is related to the ESNP, which will result in utilization of an existing inactive industrial property.
Policy 1A	Redevelop the Albany Port District property and related vacant and tank farm lands as an integral part of a regional marine transportation facility and, thus, the industrial focus of the City's Local Waterfront Revitalization Program ("LWRP").	Consistent. The Proposed Natural Gas Pipeline is not a marine transportation facility. However, the Proposed Natural Gas Pipeline conforms to the land use intent of utilizing the existing riverfront industrial lands for continued industrial use.
Policy 1B	Redevelop the City's Central Riverfront (generally defined as that area including the Zappala block, Huyck Felt, City Hall and AMTRAK properties) as a focus for commercial expansion within the city's LWRP.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 1C	Redevelop the City's Northern riverfront as a uniquely-situated site for new residential and recreational / open space development.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 1D	Stabilize and revitalize the historic Fort Crailo and Bath neighborhoods for residential and compatible limited commercial uses.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 1E	Stabilize and revitalize the Rensselaer Downtown; *i.e.*, the central business district and shopping center area, for more major retail, office, and related activities.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 1F	Integrate the various waterfront area land uses, provide recreation and public access opportunities, and preserve waterfront lands through the development of an open space / trail system extending fully from a Port area overlook in the City's highly-industrial southern end to an expansive open space / park area on lands owned by RPI in the vicinity of the Patroon Island (I-90) bridge.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 1G	Allow the extension of proposed office park development supportive of the Rensselaer Technology Park southward from the North Greenbush coastal area into the RPI-owned northern extremes of the Rensselaer Riverfront, provided environmental and access problems can be resolved.	Not applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 2	Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.	Consistent. Although the Proposed Natural Gas Pipeline is not one of the ten water-dependent uses cited in the LWRP, it is related to the ESNP. The ESNP will utilize Hudson River water for process water at the RNMP, boiler feed water at the BEDCO Power Plant, service water, backup Power Plant cooling tower makeup, and fire protection water.
Policy 2A	Maintain all suitable industrial land within and contiguous to the Port lands, to provide a critical land mass for marine-dependent industrial development.	Consistent. The Proposed Natural Gas Pipeline is located on the eastern edge of industrial properties in the Port area thereby posing no barrier to providing such a critical land mass.
Policy 3	Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg and Oswego as centers of commerce and industry and encourage the siting, in these port areas, including those under the jurisdiction of state public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.	Consistent. The Proposed Natural Gas Pipeline will further the development of port capabilities by providing energy and upgrading infrastructure that will encourage other industrial and/or commercial uses in the Rensselaer port area adjacent to the Albany Port.
Policy 3A	Require commitments to significant near term improvements in land (i.e., vehicular) access to the Port and industrial area prior to the approval of development actions, which may result in increased truck and related traffic through the City's existing residential neighborhoods.	Not Applicable. The Proposed Natural Gas Pipeline will not result in increased traffic through the city's existing residential neighborhoods.
Policy 4	Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities, which have provided such areas with their unique maritime identity.	Not Applicable. The Proposed Natural Gas Pipeline is not located in a small harbor area.
Policy 5	Encourage the location of development in areas where public services and facilities essential to such development are adequate.	Consistent. The Proposed Natural Gas Pipeline supports the development of the ESNP, which will add electrical capacity to the area. The Proposed Natural Gas Pipeline will not have an adverse impact on existing public services and facilities.
Policy 6	Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.	Consistent. The Proposed Natural Gas Pipeline will be licensed under Article VII of the Public Service Law.
Policy 7	Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.	Consistent. The Proposed Natural Gas Pipeline runs adjacent to the border of the Papscanee. The installation and operation of the Proposed Natural Gas Pipeline will not impair the viability of the habitat of the Papscanee.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 8	Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bioaccumulate in the food chain or which cause significant sublethal or lethal effect on those resources.	Consistent. There will be no discharges of hazardous waste associated with the Proposed Natural Gas Pipeline.
Policy 9	Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources. Such efforts shall be made in a manner, which ensures the protection of renewable fish and wildlife resources and considers other activities dependent on them.	Consistent. The Proposed Natural Gas Pipeline will be located underground and will not alter or impact public use access, the supplementation of existing stocks, or the development of new resources.
Policy 10	Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the state's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.	Not applicable. The Proposed Natural Gas Pipeline will not affect these resources.
Policy 11	Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.	Consistent. The Proposed Natural Gas Pipeline will not reduce flood storage or alter flood flows.
Policy 12	Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.	Consistent. The Proposed Natural Gas Pipeline will not reduce flood storage or alter flood flows. The Facility will not impact any natural protective features.
Policy 13	The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty (30) years, as demonstrated by design and construction standards and / or assured maintenance or replacement programs.	Not applicable. The Proposed Natural Gas Pipeline does not involve construction or reconstruction of erosion protection structures.
Policy 13A	The construction of erosion control bulkheading, riprapping, sea wall construction or reconstruction, or piling installation including that necessary to maintain the navigable channel of the Hudson River and the Port turning basin, shall meet sound construction practices and procedures and be undertaken only if they have a reasonable probability of functioning as demonstrated in design and construction standards and / or assured maintenance or replacement programs.	Not applicable. The construction of the Proposed Natural Gas Pipeline will not impact the Hudson River.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 14	Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development at other locations impacted by such activities or development.	Consistent. The construction of the Proposed Natural Gas Pipeline will not result in a measurable increase in erosion or flooding. Applicant will follow all applicable guidelines for erosion control and will apply EM&CS&P standards to avoid or minimize erosion.
Policy 15	Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes, which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.	Not Applicable. There will be no mining, excavating, or dredging in coastal waters relating to the construction of the Proposed Natural Gas Pipeline.
Policy 16	Public funds shall only be used for erosion protective structures where necessary to protect human life or existing development, and for new development which requires a location within or adjacent to an erosion hazard area to be able to function; but only where the public benefits outweigh the long-term monetary and other costs, including the potential for increasing erosion and adverse effects on natural protective features.	Not Applicable. No public funds will be utilized to construct or operate erosion protective structures for the Proposed Natural Gas Pipeline.
Policy 17	Whenever possible, use nonstructural measures to minimize damage to natural resources and property from flooding and erosion. Such measures shall include the following: (A) the set-back of buildings and structures; (B) the planting of vegetation and the installation of sand fencing and drainage: (C) the reshaping of bluffs; and (D) the flood-proofing of buildings or their elevation above the base flood level.	Not applicable. The Proposed Natural Gas Pipeline will not reduce flood storage or alter flood flows. Use of an existing highway ROW will minimize impact to natural resources. The Proposed Natural Gas Pipeline will not impact any natural protective features.
Policy 18	To safeguard the vital economic, social, and environmental interests of the State and its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to those safeguards which the State has established to protect valuable coastal resource areas.	Consistent. The Proposed Natural Gas Pipeline is subject to comprehensive review under the Article VII process, where the economic, social, and environmental interests of the State are evaluated as a condition of obtaining a certificate for the construction and operation of a natural gas pipeline, and that potential adverse impacts of such a natural gas pipeline are avoided, minimized, or mitigated.
Policy 19	Protect, maintain, and increase the levels and types of access to public water-related recreational resources and facilities so that these resources and facilities may be fully utilized by all the public in accordance with reasonable-anticipated public recreation needs for the protection of historic and natural resources. In providing such access, priority shall be given to public beaches, boating facilities, fishing areas, and waterfront parks.	Not applicable. The Proposed Natural Gas Pipeline does not interfere with public access to water-related recreational resources and facilities.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 19A	Develop a Port Area Overlook, including small boat launch, as a facility for passive and water-dependent active recreation and a perspective from which Port activities on both shores of the Hudson River might be viewed.	Not Applicable. The Proposed Natural Gas Pipeline does not interfere with any site being considered for the development of a port area overlook and boat launch. The canoe launch at Papscanee Creek will not be affected.
Policy 19B	Develop a class 2 bikeway linking the Port Aarea Overlook through the Fort Crailo neighborhood and Central Business District to Riverfront Park at its proposed downtown entrance.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19C	Extend development of Riverfront Park to include proposed downtown entrance and expand parking and recreational facilities.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19D	Provide public access for continuation of the Riverfront open space trail system through the Central Riverfront, the School District property, and the Amtrak property to its immediate north.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19E	Acquire an interest in Amtrak's River-most property to permit development of overlooks and open unstructured recreational areas with direct access to the beach-like shoreline at the location.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19F	Extend the Riverfront trail through a redeveloped northern Riverfront area, including clustered housing and a waterfront restaurant with associated boat mooring and fishing pier at Bath.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19G	Provide a northern focus for the City's Riverfront open space trail system by developing picnic areas and active recreational facilities, such as ball fields and tennis courts, on the RPI lands north of the Barnet Mills and extending to and beyond the Patroon Island bridge.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 19H	Link the City's Riverfront open space system with further recreational amenities and development proposed in the Town of North Greenbush under its LWRP.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 20	Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the waters edge that are publicly owned shall be provided in a manner compatible with adjoining uses. Such lands shall be retained in public ownership.	Consistent. The proposed natural gas pipeline will not alter or impact public access to the publicly owned foreshore or adjacent lands.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 21	Water-dependent and water-enhanced recreation shall be encouraged and facilitated and shall be given priority over non-water-related uses along the coast, provided such recreation is consistent with the preservation and enhancement of other coastal resources and takes into account demand for such facilities. In facilitating such activities, priority shall be given to areas where access to the recreation opportunities of the coast can be provided by new or existing public transportation services and to these areas where the use of the shore is severely restricted by existing development.	Not Applicable. The Proposed Natural Gas Pipeline will be located in an area not conducive to water dependent recreational uses. The Proposed Natural Gas Pipeline will connect with the BEDCO Power Plant, which is a water-related use.
Policy 22	Development, when located adjacent to the shore, shall provide for water-related recreation, as a multiple use, whenever such recreational use is appropriate in light of reasonably anticipated demand for such activities and the primary purpose of the development.	Not Applicable. The Proposed Natural Gas Pipeline will be located in an area not conducive to water dependent recreational uses. The Proposed Natural Gas Pipeline will not impede public access to water-related recreation.
Policy 23	Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archeology, or culture of the State, its communities, or the nation.	Consistent. The Proposed Natural Gas Pipeline will not impact structures, districts, areas or sites that are of significance in the history, architecture, archeology, or culture of the state, its communities, or the nation.
Policy 24	Prevent impairment of scenic resources of statewide significance.	Consistent. The Proposed Natural Gas Pipeline will not impact scenic resources of statewide significance
Policy 25	Protect, restore and enhance natural and man-made resources, which are not identified as being of statewide significance but which contribute to the scenic quality of the coastal area.	Consistent. The Proposed Natural Gas Pipeline will not significantly impact natural and man-made resources that contribute to the scenic quality of the coastal area.
Policy 26	Conserve and protect agricultural lands in the state's coastal area.	Consistent. The Proposed Natural Gas Pipeline will not be sited on agricultural lands in the coastal zone.
Policy 27	Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location	Consistent. The Proposed Natural Gas Pipeline will be an integral part of the proposed BEDCO Power Plant and is designed to minimize impact to the environment.
Policy 28	Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.	Not Applicable. There will be no ice management practices associated with the Proposed Natural Gas Pipeline.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 29	Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities.	Not Applicable. The Proposed Natural Gas Pipeline is not located within the described area boundaries.
Policy 30	Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards.	Not Applicable. There will be no discharge of pollutants into coastal waters associated with the construction and operation of the Proposed Natural Gas Pipeline.
Policy 31	State coastal area policies and purposes of approved LWRPs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.	Not Applicable. No coastal water classifications or water quality standards are being reviewed or modified in conjunction with the permitting, construction or maintenance of the Proposed Natural Gas Pipeline.
Policy 32	Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonable high, given the size of the existing tax base of these communities.	Not Applicable. There will be no discharge to municipal sewer systems associated with the Proposed Natural Gas Pipeline.
Policy 33	Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into the coastal waters.	Consistent. Best management practices will be employed during the construction of the Proposed Natural Gas Pipeline to control stormwater runoff.
Policy 34	Discharge of waste materials from vessels into coastal waters will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.	Not Applicable. There will be no vessel discharges of waste materials associated with the Proposed Natural Gas Pipeline.
Policy 35	Dredging and dredge spoil disposal in coastal waters will be undertaken in a manner that meets existing state dredging permit requirement, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.	Not Applicable. Dredge and dredge spoil associated with the excavation of the Proposed Natural Gas Pipeline will not be disposed in coastal waters.
Policy 36	Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent, or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges and restitution for damages will be required when these spills occur.	Consistent. The standards and practices outlined in the EM&CS&P in addition to contract specifications will ensure that coastal waters will be appropriately protected from the possibility of contamination.

Table 4.5-5 Consistency with Local and State Coastal Zone Management Policies (continued)

Policy 37	Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.	Consistent. Best management practices will be employed during the construction of the Proposed Natural Gas Pipeline to control stormwater runoff.
Policy 38	The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply	Consistent. Construction of the Proposed Natural Gas Pipeline will employ erosion control measures to ensure protection of surface water and groundwater supplies.
Policy 39	The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important land and scenic resources.	Consistent. Solid wastes associated with the construction of the Proposed Natural Gas Pipeline will be transported, stored and disposed is a manner that will protect groundwater and surface water supplies.
Policy 40	Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.	Not Applicable. The Proposed Natural Gas Pipeline is not a major steam electric generating or industrial facility. The associated BEDCO Power Plant discharges are addressed under a separate Application.
Policy 41	Land use or development in the coastal area will not cause national or state air quality standards to be violated.	Consistent. The Proposed Natural Gas Pipeline will have no impact on air quality standards.
Policy 42	Coastal management policies will be considered if the state reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal clean air act.	Not Applicable. The Proposed Natural Gas Pipeline is unrelated to whether coastal management policies will be considered if the state reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal clean air act.
Policy 43	Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.	Not Applicable. The only potential for the generation of acid rain precursors associated with the Proposed Natural Gas Pipeline is during construction and maintenance activities, both of which will be of short duration and will produce only insignificant amounts of such acid rain precursors.
Policy 44	Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these land areas.	Consistent. The Proposed Natural Gas Pipeline route has been sited to avoid or minimize impacts to tideland and freshwater wetlands.

4.5.7 Impacts and Mitigation

Minimal impacts are expected to result from the Proposed Natural Gas Pipeline project. Because the majority of the Facility will be underground, the majority of impacts are expected to be temporary. Land over the underground pipe will be restored to its original condition following construction with the exception of a 20-feet wide cleared strip generally centered on the installed Facility, as discussed above, required for inspection and maintenance purposes. Impacts to entrances and / or private roads will be coordinated with affected landowners to maintain safe access. PowerCo will ensure that all contractors maintain clean and safe work areas. Construction will be scheduled to avoid high utilization periods to minimize disruption during the construction process.

4.5.8 Agency and Landowner Consultations

4.5.8.1 Agency Consultations

The Applicant has contacted numerous state and local agencies regarding the Proposed Natural Gas Pipeline. A listing of these, in addition to copies of correspondence with and from the agencies, is provided in Exhibit ___(RPR-1).

In addition, in association with the ongoing permitting of the Projects, wetland delineation reports for the facility were prepared and submitted to the United States Army Corps of Engineers ("USACOE") / New York District on July 3, 2003. A copy was provided to Mr. Andrew Davis of the New York State Department of Public Service staff at that time. Verbal acceptance of the wetland boundaries was received from the USACOE in September 2003.

Contact has also been made with representatives of the Towns of Schodack and East Greenbush and the City of Rensselaer. Representatives of BEDCO and Niagara Mohawk

Power Company Gas Engineering met individually with the Mayor of the City of Rensselaer, the Town Supervisor of East Greenbush, and the Town Board for the Town of Schodack, to discuss the entire project and the effects and benefits to each of the municipalities.[3]

4.5.8.2 Landowner Consultations

Most of the Proposed Natural Gas Pipeline route is located within the Route 9J ROW. However, some parcels where the proposed Facility does not fall within the ROW will require landowner contact and approval. BEDCO is in the process of contacting the affected landowners and appropriate landowner agreements and easements will be negotiated.

In order to delineate and survey wetlands along the proposed route of the Proposed Natural Gas Pipeline, landowners were identified and letters sent in mid November 2002, requesting property access. Exhibit ___(RPR-1) contains a sample copy of the letter that was sent.

4.6 Geology / Hydrology

4.6.1 Geology

The Proposed Natural Gas Pipeline route is underlain by Cambrian and Ordovician bedrock that is overlain with a veneer of glacio-lacustrine silts, clays and sands of varying thickness. The Cambrian rocks are part of the Nassau Formation, composed of slate, shale and thin quartzite, that occurs on the upthrust block of a thrust fault. The Ordovician bedrock

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[3] During early stages of route development, PowerCo was working with NMPC on the proposed Facility route and engineering.

includes the Canajoharie Formation, which is composed primarily of shale and the Taconic Melange, a chaotic mixture of clasts in a pelitic matrix (turbidite), is believed to have been deposited by submarine landslides during the Taconic Orogeny. The Facility traverses the Canajoharie Formation northerly along Route 9J to the proposed BEDCO Power Plant site, just west of the thrust fault.

The lacustrine deposits that overlay the bedrock throughout the Proposed Natural Gas Pipeline route are the result of deposition in pro-glacial Lake Albany. The deposits include lacustrine silt and clay which was deposited in the relatively deep waters of the lake; lacustrine fine sands deposited in a more shoreward position in shallower water; and beach and delta deposits deposited at the shore. Where the Proposed Natural Gas Pipeline is located westerly of the surficial expression of the lacustrine deposits, the proposed route traverses alluvial deposits associated with the present location of the Hudson River that form a veneer over the lacustrine deposits.

4.6.1.1 Surficial Geology

Surficial geology along the Proposed Natural Gas Pipeline route is shown on Figure 4-4. The lacustrine silts and clays tend to be laminated deposits up to 100 meters in thickness, thinning to the east. These deposits can pose a stability problem for foundations and can pose erosion problems. Nevertheless, they pose no problem for shallow excavations such as will be required for installation of the proposed Facility.

The lacustrine fine sands are well-sorted, stratified and tend to range from 5-20 meters in thickness. These deposits will also pose no problem for installation of the proposed Facility.

The beach and delta deposits are composed generally of sand and gravel and pose no problem to the construction of the Proposed Natural Gas Pipeline.

There are also areas of recent deposits consisting mainly of fine-grained alluvium that are confined to stream valleys. These deposits tend to be relatively thin, up to one meter, but can range up to ten meters in the floodplains of larger stream valleys. These deposits do not pose a problem to construction of the Facility.

From the southern terminus of the Proposed Natural Gas Pipeline, the proposed route north along Route 9J will be constructed in lacustrine silt and clay and alluvium.

4.6.1.2 Bedrock Geology

As indicated in the general discussion of geology, the bedrock in the area of the Proposed Natural Gas Pipeline route consists of shales and other related rocks, which do not pose a significant problem to excavation, and, if encountered, can be removed by ripping or hydraulic hammering. Also, throughout most of the Proposed Natural Gas Pipeline route, these rocks occur at depths below the cover requirements for the pipe.

4.6.2 Groundwater

The most important groundwater resources in the area of the proposed Facility are located within the Schodack and Kinderhook Aquifers. These deposits are proglacial terraces comprised of sands and gravels deposited as outwash and kame deposits associated with deltaic deposits laid down in Lake Albany. The terrace deposits are typically between 75 and 150 feet thick, but the saturated zone is well below the ground surface. These aquifers are located easterly of the Proposed Natural Gas Pipeline route and will be unaffected by construction.

The lacustrine silts and clays, with the exception of scattered areas that display a confined aquifer system, are not considered a source of more than domestic level water supply due to very slow yield. The confined aquifers are the result of lakebed silts and clays being deposited over thin layers of sand and fine gravel, apparently bottomset beds, which can yield up to 10 gallons per minute. These confined aquifers are also located well below the ground surface and should be unaffected by construction.

With the exception of alluvium deposits, which are too thin to constitute sources of water supply, existing information indicates that groundwater will be located well below the construction depth required for installation of the Proposed Natural Gas Pipeline and, therefore, no significant impacts to groundwater are anticipated.

4.7 Natural Resources

4.7.1 Fisheries

4.7.1.1 Fishery Classification

Contact was made with the New York State Department of Conservation ("NYSDEC") to characterize the streams that would be crossed by the alignment of the Proposed Natural Gas Pipeline. The NYSDEC identified seven streams in the vicinity of the proposed Facility route. Of these seven streams, the proposed Facility will cross six. These six stream crossings are located on Figure 4-5 and are more fully identified in Table 4.7-1. All six of these streams are classified as Class C waters. Pursuant to 6 NYCRR § 701(8), the best usage of Class C waters is fishing. These waters are suitable for fish propagation and survival. The water quality is suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Table 4.7-1 Stream Crossings

Crossing #	Stream Name	Class (Standard)[1]	Intermittent / Perennial	Crossing Method[2]
1	Vierda Kill	C(T)	Perennial	Bore or DD
2	Tributary of Papscanee Creek	C	Intermittent	OC / WD
3	Tributary of Papscanee Creek	C	Intermittent	OC / WD
4	Tributary of Papscanee Creek	C	Intermittent	OC / WD
5	Tributary of Papscanee Creek	C(T)	Perennial	DD
6	Tributary of Papscanee Creek	C	Intermittent	OC / WD

Notes: 1) C – Best usage is fishing
C(T) – Designated trout waters
2) OC – Open cut
WD – Wet ditch
DD – Dry ditch

In addition to the six streams identified by the NYSDEC, an additional ten small streams associated with the wetlands along Route 9J will also be crossed by the current alignment of the Proposed Natural Gas Pipeline. It is anticipated that these smaller streams will be crossed using the open-cut, wet ditch method, dependent on site-specific conditions.

4.7.1.2 Fisheries of Special Concern

The Proposed Natural Gas Pipeline is located immediately east of Papscanee, a significant coastal fish and wildlife habitat. The Papscanee is a phragmites dominated floodplain wetland habitat and is the northernmost major wetland area in the Hudson River estuary. The Moordener and Papscanee are tidal creeks that provide habitat for many species. Anadromous and resident freshwater fish use them for spawning and nursery purposes,

while a reported population of map turtles (*Graptemys geographica*) also inhabits the creeks. Many birds use the Papscanee for feeding and resting during migration, while other bird species nest here. These species include the least bittern (*Ixobrychus exilis*), a state listed threatened species, green-backed heron (*Butorides virescens*), Canada goose (*Branta canadensis*), American black duck (*Anas rubripes*), wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), Virginia rail (*Rallus limicola*), common moorhen (*Gallinula chloropus*), spotted sandpiper (*Actitis macularia*), common sandpiper (*Actitis hypoleucos*), swamp sparrow (*Melospiza georgiana*), marsh wren (*Cistothorus palustris*), and belted kingfisher (*Ceryle alcyon*).

The Proposed Natural Gas Pipeline will be located on the east side of Route 9J in the vicinity of the Papscanee and, therefore, avoids direct contact with the Papscanee, reducing the potential for the project to impact this significant habitat. The Moordener Creek is south of the interconnection point of the proposed Facility with TGP's No. 200, natural gas transmission line and will not be impacted by the construction or operation of the Facility.

4.7.1.3 Construction and Operation Impacts

Water quality within the streams potentially impacted by the construction of the Proposed Natural Gas Pipeline will be maintained at all times. The construction procedures that will be followed during pipeline installation to protect surface water resources are described in Section 4.3. These procedures along with the standards and practices contained in the EM&CS&P will be followed for all types of water crossings.

4.7.1.4 Minimization of Impacts

The following standards will be employed to ensure any construction effects will be mitigated and water quality will be maintained:

- Minimizing clearing and leaving as much vegetation in place as possible along stream banks;
- Expediting construction and limiting the amount of equipment and activities in waterbodies;
- Coordinating construction activities to avoid high flow and spawning periods;
- Installing erosion controls to minimize sediment migration and siltation of streams;
- Constructing waterbody crossings as perpendicular to the axis of the waterbody channel as engineering and routing conditions allow;
- Maintaining ambient downstream flow rates;
- Removing all construction material and structures from the waterbody after construction;
- Restoring stream channels and bottoms to their original configurations and contours;
- Permanently stabilizing stream banks and adjacent upland areas after construction;
- Inspecting ROWs periodically during and after construction and repairing any erosion controls and/or performing restoration, as needed, in a timely manner;

- Completing trenching and backfilling in the waterbody (not including blasting) within 24 hours;

- Stabilizing stream banks and installing temporary sediment barriers within 24 hours of completion of backfilling. Complete bank stabilization before returning flow to the waterbody channel; and

- Using clean gravel or native cobbles for the upper 12 inches of trench backfill in all waterbodies, with particles sized and bedded to compactions equaling native, undisturbed bed materials so that "fines" are not lifted by post-construction flows.

The following "dry stream" technique will be used for the crossing of the tributary of the Papscanee Creek designated as trout waters:

- Install adequately sized flume pipes prior to trenching or any blasting (if required);

- Use sand bags or equivalent water diversion structures at both the upstream and downstream side of the flume pipe to channel water flow (use of fill to divert flow will be minimized to the greatest extent practicable. Rubber dams will be considered for use wherever possible);

- Properly place the flume pipe in the stream channel so that it is stable and align it with the bed of the channel to allow for bi-directional faunal movements ;

- Retain the flume or diversion / water bypass, in place, during trenching, pipe laying, and backfilling activities; and

- Remove all flume pipes and dams that are not part of the equipment bridge after final cleanup but before permanent seeding.

It is anticipated that the crossing of the *Vierda Kill* will be accomplished via a boring. If not, the "dry stream" technique will be used at this stream crossing.

4.7.2 Endangered Species

4.7.2.1 Threatened and Endangered Species

To identify any potential threatened and endangered species issues associated with this Facility, the New York Natural Heritage Program ("NYNHP") was contacted with requests for information on known occurrences of rare plant or animal species within the Facility study area. The letters received (NYNHP, 2002 and 2003) from NYNHP identified known occurrences of two state-listed threatened species in the area. These species are the least bittern (*Ixobrychus exilis*) and large twayblade (*Liparis lilifolia*). Threatened species as defined in the New York State Environmental Conservation Law, must either be any native species likely to become an endangered species within the foreseeable future in New York or any species listed as threatened by the U.S. Department of the Interior as enumerated in the Code of the Federal Regulations 50 CFR § 17.11. The last documented sighting of the least bittern and the large twayblade in the study area was in 1983 and 1856, respectively. The U. S. Fish and Wildlife Service ("USFWS") in responses to similar requests indicated that no federally listed threatened or endangered species occur within the study area (USFWS, 2002 and 2003). The USFWS did however indicate in their 2003 response that the handsome sedge (*Carex formosa*), regarded as a species of concern (formerly known as a Category 2 Candidate species) by the USFWS, has been reported from the vicinity of the Proposed Natural Gas Pipeline. While not identified by the NYNHP (NYNHP, 2002 and 2003) as occurring in the project study area, the handsome sedge is currently listed by NYNHP (NYNHP, 2002) as a State of New York threatened species.

4.7.2.2 Least Bittern

Least bitterns are regarded as migratory birds in New York that are restricted primarily to freshwater ecosystems. Preferring emergent vegetation, least bitterns generally select cattail marshes for nesting but they are also known to nest in *Phragmites* dominated wetlands. The diet of least bitterns consists primarily of aquatic invertebrates but they also feed on amphibians, reptiles, insects, and fish. Least bittern egg laying in New York has been reported as occurring between May 15 and July 10 (Degraff and Yamasaki, 2001). Nests are typically constructed in dense stands of emergent vegetation approximately 6 inches to 2.5 feet above water that is up to 3 feet deep. Nests are also found close to open water (Degraff and Yamasaki, 2001). The least bittern is at the edge of its range in New York State, which may explain its rarity in the state (National Geographic, 1999).

In addition to a status given to certain species in New York, NYNHP also ranks and evaluates the records of known occurrences of these species in the state. Because least bitterns are migratory birds, NYNHP ranks least bittern non-breeding and breeding populations. For non-breeding populations, NYNHP has given the least bittern a rank of S1N. The S1N rank indicates that there are 5 or fewer occurrences, very few remaining individuals, very few acres of suitable habitat, and / or some factor of the species' biology make it especially vulnerable in New York State. For breeding populations, NYNHP has given least bittern a rank of S3B. This rank indicates that there are between approximately 21 and 100 occurrences and limited acreage of suitable habitat. NYNHP further indicates that there is insufficient data about the least bittern to categorize the quality, condition, viability, and defensibility of the known occurrences in the state. Based on a ranking of global rarity, NYNHP has given least bittern a rank of G5, indicating that globally the species is secure, though it may be rare in parts of its range especially at its periphery.

Fieldwork studies conducted during September of 2002 and the winter through spring of 2003 were focused on delineating wetlands, searching for rare species, and characterizing upland resources along the route of the Proposed Natural Gas Pipeline. During the course of completing field studies, least bitterns were not observed in the project area. It should also be noted that the proposed pipeline will not cross significant cattail or phragmities dominated marsh lands with open water elements.

4.7.2.3 Large Twayblade

The large twayblade is a terrestrial orchid that inhabits mostly deciduous woods (Magee and Ahles, 1999), but is also found on the banks of woodland streams, and in ravines (Williams and Williams, 1983). Historic habitat in the general location of the project is described as damp woods (NYNHP, 2003). This plant grows between 4 to 12 inches in height. Its flowers range from dull pink to brown and are ½ inch long. Flowering time for this orchid is June and July. The large twayblade ranges from Minnesota and Wisconsin south to northern Arkansas, Mississippi, Alabama, and northern Georgia, east to the Atlantic coast (Williams and Williams, 1983).

NYNHP identifies the large twayblade's global status as G5, defined as demonstrably secure throughout its range (but possibly rare in parts) (NYNHP, 2002). NYNHP also gives the plant a state rank of S1 identified as being critically imperiled in New York State because of extreme rarity (5 or fewer sites or few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological factors (NYNHP, 2002). Historic records indicate that the plant was last recorded in the vicinity of the project area around 1856 (NYNHP, 2003).

Fieldwork studies conducted during September of 2002 and the winter through spring of 2003 were focused at delineating wetlands, searching for rare species, and characterizing upland resources along the route of the Proposed Natural Gas Pipeline. During these field efforts, no specimens of the large twayblade were located along the proposed Facility route.

4.7.2.4 Handsome Sedge

Handsome sedge is a slender, grass-like perennial that grows in clumps that are ¾ to 2 ½ feet in height. Its stems, also known as culms, are tinged with purple at their bases. The leaves are very thin and hairy underneath (MNHESP, 1994). Handsome sedge flowers May through July (Magee and Ahles, 1999) and in general is associated with eastern deciduous forests (USGS, nd). It is known to occur in Minnesota, New York, New Jersey, Ohio, Vermont, Connecticut, Massachusetts, Pennsylvania, Wisconsin, North Dakota and Quebec (USGS, nd).

NYNHP identifies the handsome sedge global status as G4, defined as apparently secure throughout its range (but possibly rare in parts (NYNHP, 2002)). NYNHP also gives the plant a double state rank of S2 - S3. The first rank (S2) indicates rarity based on current documentation. The S2 rank as defined by NYNHP indicates that the plant is regarded as imperiled in New York State because of rarity (6-20 sites or few remaining individuals) or highly vulnerable to extirpation from New York due to biological factors. The second rank (S3) indicates the probable rarity after all historical records and likely habitat has been field checked. The S3 rank indicates that the species is rare in New York State (usually 21-100 extant sites).

Fieldwork studies conducted during September of 2002 and the winter through late spring of 2003 were focused at delineating wetlands, searching for rare species, and characterizing

upland resources along the route of the Proposed Natural Gas Pipeline. During these field efforts, no specimens of the handsome sedge were located along the proposed Facility route.

4.7.3 Vegetation and Wildlife

4.7.3.1 Overview

The United States Forest Service, in *Description of the Ecoregions of the United States* by Robert Bailey (1995), has divided the country into "ecosystems of regional extent or ecoregions." It is a hierarchical classification system based on factors such as climate, vegetation, and geomorphology. According to this system, the ESNP site and proposed route of the Proposed Natural Gas Pipeline are located in the Hudson Valley Section of the Eastern Broadleaf Forest (Oceanic) Province.

4.7.3.2 Setting

The Hudson Valley Section is primarily linear lowland created by graben-faulting, eroding bedrock, and glacial scour. Elevations range up to 1000 feet, but are typically below 500 feet. Approximately 50 to 80 percent of the area is characterized by gentle slopes and 50 to 75 percent can be classified as uplands.

Approximately 60 percent of this area is forested. The major vegetation types in this region include northern hardwood forests and Appalachian oak forests. Pitch pine-scrub oak communities occur in the Albany sand plains, which are located west of the Hudson River, northwest of the Proposed Natural Gas Pipeline. Adjacent to the river and its urbanized corridor, however, forest lands are minimal, with commercial / industrial, open field, residential, or agricultural lands being the dominant land uses.

The Hudson River and its tributaries are the dominant surface water features of this area. Also occurring are freshwater wetlands, small lakes, ponds, and intermittent and perennial streams.

As a result of European settlement, much of the original forest ecosystem, and consequently, the original forest flora was converted to agricultural ecosystems. In present times, forest ecosystems have reestablished themselves on abandoned agricultural land. While many forest species have been able to reestablish themselves, large predators have not. Common wildlife in the Hudson Valley Section includes white-tailed deer *(Odocoileus virginianus)*, gray squirrels (*Sciurus carolinensis)*, white-footed mice (*Peromyscus leucopus)*, red-eyed vireos (*Vireo olivaceus*), and red-spotted newts *(Notophthalmus v. viridescens)*. This area is devoid of unique Federally-listed threatened and endangered species (see Section 4.7.2).

The average annual temperature in the Hudson Valley Section ranges from 45 to 50 degrees Fahrenheit. Annual precipitation averages 40 inches, while annual snowfall averages 40 to 60 inches.

4.7.3.3 Existing Terrestrial Community Types

The NYSDEC has developed a list of the Ecological Communities that reflect the biological landscape of the State of New York (Reschke 1990). Field surveys determined that the primary NYSDEC-defined upland ecological communities associated with the Proposed Natural Gas Pipeline route are Successional Old Field, Successional Shrubland, and a composite of several forest cover types, which will be referred to as "Forested Areas" in this Application. The lists of wildlife and plant species in each Ecological Community were generated by a combination of field investigations and literature research. Descriptions of

these Ecological Communities are provided below along with tabulations of plants and animal species typically associated with these community types.

4.7.3.3.1 Successional Old Field

Successional Old Fields occur throughout the State of New York. They consist of open meadow areas dominated by forbs and grasses located on sites that have been cleared, plowed, and abandoned. Shrubs are often also present in this cover type, but make up less than 50% cover in the community. Successional Old Fields are found on most soil types and across a full range of moisture regimes.

Goldenrods (*Solidago spp.* and *Euthamia spp.*), birdsfoot trefoil (*Lotus corniculatus*), knapweed (*Centaurea spp.*), Queen-Anne's-lace (*Daucus carota*), red clover (*Trifolium pratense*), common milkweed (*Asclepias syriaca*), gray stem dogwood (*Cornus foemina*), and northern arrowwood (*Viburnum recognitum*) are common species in this cover type.

Table 4.7-2 has a list of plant species typically encountered in each community type.

Successional Old Fields provide suitable habitat for a variety of amphibians, reptiles, birds, and mammals. One amphibian that may be found in this community type is the eastern American toad (*Bufo a. americanus*). Reptiles that are associated with Successional Old Fields include the common garter snake (*Thamnophis sirtalis*), northern brown snake (*Storeria d. dekayi*), and the northern black racer (*Coluber c. constrictor*). Some of the birds that inhabit this community type include red-tailed hawks (*Buteo jamaicensis*), field sparrows (*Spizella pusilla*), and American goldfinches (*Carduelis tristis*). Common mammals in Successional Old Fields include the eastern cottontail (*Sylvilagus floridanus*),

the woodchuck (*Marmota monax*), the meadow vole (*Microtus pennsylvanicus*), and the meadow jumping mouse (*Zapus hudsonius*).

Table 4.7-3 has a list of all of the wildlife species that are typically found in each community type.

4.7.3.3.2 Successional Shrubland

Successional Shrublands also are located across New York State. They typically occur on sites that have been cleared or disturbed, but exhibit a predominance of woody vegetation. By definition, shrubs make up at least 50% of the coverage in this community type. Successional Shrublands are found on most soil types and across a full range of moisture regimes.

Gray stem dogwood (*Cornus foemina*), common buckthorn (*Rhamnus cathartica*), northern arrowwood (*Viburnum recognitum*) and honeysuckle (*Lonicera sp.*) are common dominant species in this cover type.

Table 4.7-2 has a list of plant species typically found in each cover type.

Table 4.7-2 Upland Vegetation Communities and Representative Plant Species

Common Name	Scientific Name	Comments
Successional Old Field – Shrubs		
gray stem dogwood	*Cornus foemina*	Swamps, riverbanks, and coastal plains
northern arrowwood	*Viburnum recognitum*	Moist woods and swamps
staghorn sumac	*Rhus typhina*	Dry, open places
common buckthorn	*Rhamnus cathartica*	Fencerows, fields, vacant lots, and open woods
Successional Old Field - Herbaceous Plants		
Queen Anne's lace	*Daucus carota*	Open places with varying soil conditions
common teasel	*Dipsacus sylvestris*	Roadsides and waste grounds, especially in low moist places
Goldenrods	*Solidago spp. and Euthamia spp.*	Open places with varying soil conditions
common ragweed	*Ambrosia artemisifolia*	Waste places
bull thistle	*Cirsium vulgare*	Pastures, fields, roadsides, and waste places
Canada thistle	*Cirsium arvense*	Fields and waste places
sorrels	*Rumex spp.*	Open places with varying soil conditions
crown vetch	*Coronilla varia*	Along highways and other open areas
English plantain	*Plantago lanceolata*	Cosmopolitan weed, particularly in moist areas
common plantain	*Plantago major*	Lawns, roadsides, and wet places
black knapweed	*Centaurea nigra*	Fields, roadsides, and waste places
common burdock	*Arctium minus*	Roadsides and waste places
Blackberries	*Rubus spp.*	Wide variety of disturbed sites
tick trefoil	*Desmodium spp.*	Open places with varying soil conditions
Asters	*Aster spp.*	Open places with varying soil conditions
common milkweed	*Asclepias syriaca*	Fields, meadows, and roadsides
multiflora rose	*Rosa multiflora*	Open places with varying soil conditions
red clover	*Trifolium pratense*	Fields and roadsides
mixed grasses	*Poa spp., Phleum pratense, Agropyron repens, Bromus sp., Anthoxanthum odoratum, Dactylis glomerata*	Open places with varying soil conditions
Successional Shrubland – Shrubs		
gray stem dogwood	*Cornus foemina*	Swamps, riverbanks, and coastal plains
northern arrowwood	*Viburnum recognitum*	Moist woods and swamps
staghorn sumac	*Rhus typhina*	Dry, open places
common buckthorn	*Rhamnus cathartica*	Fencerows, fields, vacant lots, and open woods

Table 4.7-2 Upland Vegetation Communities and Representative Plant Species (Continued)

Common Name	Scientific Name	Comments
Successional Old Field - Shrubs (Continued)		
roses	*Rosa sp.*	Disturbed areas, thickets, and woods
quaking aspen	*Populus tremula*	Moist upland woods and streamsides, often on cut-over or burned land
hawthorns	*Crataegus spp.*	Disturbed sites, along the margins of woodlands, streambanks, and abandoned fields
honeysuckle	*Lonicera sp.*	Thickets, fields, woods
multiflora rose	*Rosa multiflora*	Open places with varying soil conditions
Forested Areas –Trees		
sugar maple	*Acer saccharum*	Rich to fairly dry woods, especially in calcareous soils
American beech	*Fagus grandifolia*	Moist or wet lowland soils especially on and near the coastal plain
white oak	*Quercus alba*	Upland woods
white pine	*Pinus strobes*	Many habitats, especially in fertile or well drained, sandy soils
red maple	*Acer rubrum*	Swamps, alluvial soils and moist uplands
American elm	*Ulmus Americana*	Moist fertile soils
white ash	*Fraxinus Americana*	Moist woods
hornbeam	*Ostrya virginiana*	Moist woods
black cherry	*Prunus serotina*	Waste land and forest margins
chestnut oak	*Quercus prinus*	Dry or moist upland or rocky woods
red oak	*Quercus rubra*	Hill slopes to valley floors, deep fine textured soils
hawthorns	*Crataegus spp.*	Rich woods
American basswood	*Tilia Americana*	Rich woods
black birch	*Betula lenta*	Moist woods
Forested Areas - Shrubs		
ironwood	*Carpinus caroliniana*	Moist woods
common buckthorn	*Rhamnus cathartica*	Fencerows, fields, vacant lots, and open woods
honeysuckles	*Lonicera sp.*	Thickets, fields, woods
Forested Areas - Herbaceous Plants		
May apple	*Podophyllum peltatum*	Moist, preferably open, woods
Virginia creeper	*Parthenocissus quinquefolia*	Moist soils
wood white aster	*Aster divaricatus*	Woods
white snakeroot	*Eupatorium rugosum*	Woods
partridgeberry	*Mitchella repens*	Woods

Table 4.7-3 Potential Wildlife Species within each Community Type

Common Name	Scientific Name	Community Type		
		SOF*	SS**	FA***
Amphibians/Reptiles				
eastern American toad	*Bufo a. americanus*	X	X	X
spotted salamander	*Ambystoma maculatum*			X
northern redback salamander	*Plethodon cinereus*			X
northern spring peeper	*Pseudacris c. crucifer*			X
gray treefrog	*Hyla versicolor*			X
wood frog	*Rana sylcatica*			X
northern brown snake	*Storeria d. dekayi*	X	X	X
common garter snake	*Thamnophis sirtalis*	X	X	X
nothern black racer	*Coluber c. constrictor*	X	X	X
eastern smooth green snake	*Liochlorophis vernalis*	X	X	
eastern milk snake	*Lampropeltis t. triangulum*	X	X	X
northern redbelly snake	*Storeria o. occipitomaculata*		X	X
northern ringneck snake	*Diadophis punctatus edwardsii*			X
Birds				
red-tailed hawk	*Buteo jamaicensis*	X	X	X
American kestrel	*Falco sparverius*	X	X	
ring-necked pheasant	*Phasianus colchicus*	X		
eastern kingbird	*Tyrannus tyrannus*	X	X	
tree swallow	*Tachycineta bicolor*	X		
eastern bluebird	*Sialia sialis*	X	X	
American tree sparrow	*Spizella arborea*	X	X	
field sparrow	*Spizella pusilla*	X		
song sparrow	*Melospiza melodia*	X	X	
brown-headed cowbird	*Molothrus ater*	X	X	
American goldfinch	*Carduelis tristis*	X		
American goodcock	*Scolopax minor*		X	
black-billed cuckoo	*Coccyzus erythropthalmus*		X	
yellow-billed cuckoo	*Coccyzus americanus*		X	
chimney swift	*Chaetura pelagica*		X	
gray catbird	*Dumetella carolinensis*		X	

Table 4.7-3 Potential Wildlife Species within each Community Type (Continued)

Common Name	Scientific Name	Community Type		
		SOF*	SS**	FA***
Birds (Continued)				
northern mocking bird	*Mimus polyglottus*		X	
cedar waxwing	*Bombycilla cedrorum*		X	
yellow warbler	*Dendroica petechia*		X	
eastern towhee	*Pipilo erythrophthalmus*		X	X
northern cardinal	*Cardinalis cardinalis*		X	
ruffed grouse	*Bonasa umbellus*			X
wild turkey	*Meleagris gallopavo*			X
eastern screech-owl	*Otus asio*			X
downy woodpecker	*Picoides pubescens*			X
hairy woodpecker	*Picoides villosus*			X
northern flicker	*Colaptes auratus*			X
eastern wood-pewee	*Contopus virens*			X
great crested flycatcher	*Myiarchus crinitus*			X
red-eyed vireo	*Vireo olivaceus*			X
blue jay	*Cyanocitta cristata*			X
American crow	*Corvus brachyrhynchos*			X
black-capped chickadee	*Poecile atricapillus*			X
tufted titmouse	*Baeolophus bicolor*			X
white-breasted nuthatch	*Sitta carolinensis*			X
brown creeper	*Certhia americana*			X
Veery	*Catharus fuscescens*			X
hermit thrush	*Catharus guttatus*			X
wood thrush	*Hylocichla mustelina*			X
brown thrasher	*Toxostoma rufum*			X
chestnut-sided warbler	*Dendroica pensylvanica*			X
black-and-white warbler	*Mniotilta varia*			X
American redstart	*Setophaga ruticilla*			X
ovenbird	*Seiurus aurocapillus*			X
dark-eyed junco	*Junco hyemalis*			X
rose-breasted grosbeak	*Pheucticus ludovicianus*			X

Table 4.7-3 Potential Wildlife Species within each Community Type (Continued)

Common Name	Scientific Name	Community Type		
		SOF*	SS**	FA***
Mammals				
Virginia opossum	*Didelphis virginiana*	X	X	X
northern short-tailed shrew	*Blarina brevicauda*	X	X	X
hairy-tailed mole	*Parascalops breweri*	X		X
eastern cottontail	*Sylvilagus floridanus*	X	X	
little brown myotis	*Myotis lucifugus*			X
eastern chipmunk	*Tamias striatus*			X
gray squirrel	*Sciurus carolinensis*			X
southern flying squirrel	*Glaucomys volans*			X
deer mouse	*Peromyscus maniculatus*			X
woodland vole	*Microtus pinetorum*			X
woodchuck	*Marmota monax*	X	X	
meadow vole	*Microtus pennsylvanicus*	X	X	X
meadow jumping mouse	*Zapus hudsonius*	X	X	
woodland jumping mouse	*Napaeozapus insignis*			X
coyote	*Canis latrans*	X	X	X
red fox	*Vulpes vulpes*	X	X	X
gray fox	*Urocyon cinereoargenteus*		X	X
raccoon	*Procyon lotor*	X	X	X
ermine	*Mustela erminea*	X	X	X
long-tailed weasel	*Mustela frenata*	X	X	X
striped skunk	*Mephitis mephitis*	X	X	X
white-tailed deer	*Odocoileus virginianus*	X	X	X

*SOF = Successional Old Field
**SS = Successional Shrubland
***FA = Forested Area

The eastern American toad is an amphibian that may be found in this community type. The eastern smooth green snake (*Liochlorophis vernalis*), the eastern milk snake (*Lampropeltis t. triangulum*), and the common garter snake are reptiles that are commonly found in Successional Shrublands. Birds typical of Successional Shrublands include the gray catbird (*Dumetella carolinensis*), the song sparrow (*Melospiza melodia*), and the cedar waxwing

(*Bombycilla cerorum*). Common mammals in this community type include the white-tailed deer (*Odocoileus virginianus*), the red fox (*Vulpes vulpes*), the coyote (*Canis latrans*), and the eastern cottontail.

Table 4.7-3 has a list of wildlife species that are typically found in each community type.

4.7.3.3.3 Forested Areas

Forested Areas are abundant throughout the State of New York. The forested areas along the route of the Proposed Natural Gas Pipeline vary in composition and environmental characteristics. Soils range from calcareous to alluvial. Forested areas also exist across an array of moisture regimes.

White oak *(Quercus alba)*, red oak (*Quercus rubra)*, and sugar maple *(Acer saccharum)* are common dominant species in the Forested Area community type. Black cherry (*Prunus serotina)* and American basswood (*Tilia americana)* are common associates and typical understory species include Virginia creeper and ironwood.

Table 4.7-2 has a list of species typically found in each cover type.

Amphibians typical of Forested Areas include northern redback salamanders (*Plethodon cinereus*), gray treefrogs (*Hyla versicolor)*, and wood frogs (*Rana sylvatica*). This community type is often inhabited by reptiles including northern brown snakes and common garter snakes. Birds common to this community type include the ruffed grouse (*Bonasa ubellus*), the wild turkey (*Meleagris gallopavo*), the downy woodpecker (*Picoides pubescens*), the black-capped chickadee (*Poecile atricapillus*), the brown creeper (*Certhia americana*), and the ovenbird (*Seirurus aurocapillus*). Mammals that may inhabit Forested Areas include white-tailed deer, coyotes, eastern chipmunks, and gray squirrels (*Sciurus carolinensis*).

Table 4.7-3 has a list of wildlife species that are typically found in each community type.

4.7.3.4 Unique, Sensitive, or Protected Habitats

As noted in Section 4.5.6, the Proposed Natural Gas Pipeline route is located in the coastal zone of the Hudson River and adjacent to the Papscanee, the only unique, sensitive, or protected habitats in the area of the proposed Facility. A discussion of the wildlife present in the coastal zone, including the Papscanee, is contained within Section 4.7.1.2.

4.7.3.5 Impacts and Mitigation

Proceeding north from the new gate station, the Proposed Natural Gas Pipeline will be constructed along the east side of the Route 9J ROW into the Town of East Greenbush where, approximately 330 feet south of the municipal boundary of the City of Rensselaer it crosses under Route 9J, the CSX rail line and a strip of Albany Port District Commission land. From that point, the proposed Facility turns northward across industrially-zoned property. The proposed Facility route will require a construction easement from NYSDOT for work within the Route 9J ROW and new easements for the crossing of private property associated with the northern end of the route.

From the southern end of the Proposed Natural Gas Pipeline route to the crossing of the CSX rail line, the Facility primarily traverses cleared or semi-wooded ROW adjacent to the paved roadway. Some drainage ditch or adjacent slope-influenced wet areas within the Route 9J ROW are crossed by the proposed Facility route.

From the crossing point of the CSX rail line, the Proposed Natural Gas Pipeline route travels north, primarily through forest, and utilizes a former railroad bed / spur over a portion of this segment to minimize impacts to forested wetlands.

The initial construction of the Proposed Natural Gas Pipeline will impact both previously cleared and upland vegetative communities that occur in the ROW. In the long term, the ROW maintenance practices will allow the grassy and shrub-covered areas east of Route 9J to return to their pre-construction conditions. East and west of Route 9J, the only potential long-term impact will result from clearing portions of the currently forested areas of the ROW and permanent conversion of some of these areas to managed grassy and shrub-covered areas and non-forested wetland areas. Once construction is complete, pre-construction contours will be re-established and areas disturbed by construction will be stabilized with vegetation.

No significant long-term impacts to wildlife are anticipated from the Proposed Natural Gas Pipeline since no significant wildlife habitat is actually crossed and construction activities will be short-term and temporary. Following construction, most of the areas that have been disturbed will be allowed to revert to pre-construction conditions. The 20-foot wide cleared area over the Facility will be allowed to re-vegetate, although it will be maintained in a herbaceous and / or shrubby condition.

4.7.4 Wetlands

The wetlands associated with the Proposed Natural Gas Pipeline exist in two distinctly different environmental situations. The southern approximately 3.9 miles of the proposed route follow an existing state highway (Route 9J) and the wetlands associated with this segment are primarily associated with the drainage system for the roadway. The northern approximately 0.6 miles of the proposed route crosses generally undeveloped portions of industrially-zoned properties. For ease of distinguishing these two very different ecological settings, the roadway portion of the route, from the hot tap on TGP's No. 200 transmission

line to the crossing of the CSX rail line has been designated as Segment 1. The remainder of the proposed route has been designated as Segment 2. Figure 4-1 and Figure 4-6 (4 sheets) depict the locations of the wetlands along the Route 9J ROW.

4.7.4.1 Wetland Delineation Corridor

Prior to the actual implementation of wetland delineation field efforts, study corridors were established to facilitate project planning. These study corridors represent the locations where proposed construction activities are likely to occur. The actual width of the delineation corridor varies based on the location of the particular Facility segment and construction methods that are expected to be employed. By delineating all of the wetlands on these corridors, it is possible to identify potential temporary and permanent impacts to wetland resource areas. This information also facilitates the identification of potential avoidance / mitigation strategies.

4.7.4.1.1 Segment 1 – Route 9J

Along Segment 1, the wetland delineation corridor varies in width and location relative to the roadway. East of Route 9J, the wetland delineation corridor is located between points 10 feet east of the Proposed Natural Gas Pipeline centerline depicted on project plans, west to the eastern most edge of pavement. The proposed route extends along the east side of Route 9J from the new gate station northward for a distance of approximately 3.9 miles, at which point the Proposed Natural Gas Pipeline turns west and crosses under Route 9J and the CSX rail line.

Along the west side of Route 9J, additional wetland delineation study corridors were established for areas of Segment 1 where the Facility is not currently proposed. These

additional study corridors were included in the delineation effort to account for wetlands that might exist within 100 feet of the proposed Facility construction corridor. They are included as a part of the analysis of Segment 1 although the Proposed Natural Gas Pipeline will not impact any of the wetlands in these additional study corridors.

These study corridors include the area along the west side of Route 9J that begins where the TGP No. 200 transmission pipeline crosses under Route 9J and extends northward for a distance of approximately 3.2 miles. The approximate northern terminus of this study corridor is just south of the intermittent stream crossing under Route 9J that is associated with the northern end of NYSDEC designated Wetland EG-1 and Wetland 9J23 (see, Figure 4-6, Sheet 3 of 4). The width of this study corridor is 75 feet, beginning at the western most edge of pavement to a point located 75 feet west. Wetlands in this study corridor include 9J36 through 9J24 (south to north).

Continuing northward along Route 9J to the proposed crossing of Route 9J and the CSX rail line by the proposed Facility (a distance of approximately 0.7 miles), the wetland delineation corridor on the west side of the roadway is reduced to 40 feet in width, with the western edge of the study corridor located 40 feet west of the western most pavement edge of Route 9J. The narrower wetland study corridor for this area is justified due to the presence of additional development and the fact that the raised CSX rail bed approaches the Route 9J pavement, thereby limiting the Facility's placement without crossing under the rail line. Wetlands in this study corridor include 9J23 through 9J20 (south to north).

Some of the wetland boundaries in Segment 1 were approved under a formerly issued jurisdictional determination (USACOE Permit Application No. 2003-00388-YN, Letter of Determination dated 14 May 2003) (see, Exhibit ___ (RPR-1), pp. 109-114). The wetland

boundaries along the current proposed Facility route that were approved or partially approved in that document include Wetlands C32, and 9J1 through 9J17.[4] Verbal approval of the wetland boundaries for the remaining wetlands crossed by the proposed Facility was received in September 2003. The formal jurisdictional determination was issued the following month (USACOE Permit Application No. 2003-00388-YN, Letter of Determination dated 02 October 2003) (see, Exhibit ___ (RPR-1), pp. 115-118).

4.7.4.1.2 Segment 2 – West of Route 9J and CSX ROW

The wetland delineation corridor for Segment 2 is a 75-foot wide strip that approximately parallels the CSX line at a distance starting approximately 35 feet from the west side of the CSX rail line and extending northerly to the BEDCO Power Plant site. The boundaries of Wetlands I, H and F along Segment 2 were approved in a previous USACOE Jurisdictional Determination (USACOE Permit Application Number 2001-00813-YN, Letter of Determination dated May 14, 2003) (see, Exhibit ___ (RPR-1), pp. 104-108). Verbal approval of the wetland boundaries for the remaining wetlands in Segment 2 that are crossed by the proposed Facility was received in September 2003. The formal jurisdictional determination was issued the following month (USACOE Permit Application No. 2003-00388-YN, Letter of Determination dated 02 October 2003) (see, Exhibit ___ (RPR-1), pp. 115-118).

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4 Wetlands 9J18 and 9J19 (located along the east side of Route 9J) were also approved as part of the above-referenced Jurisdictional Determination. However, the Facility will cross Route 9J before these two wetlands are encountered.

4.7.4.2 Existing Wetland Conditions

Sixty-four wetlands were identified within the wetland study corridor including both sides of Route 9J. However, only 50 of these wetlands are associated with the Proposed Natural Gas Pipeline route. Table 4.7-4, Part A presents a summary of the 50 wetlands identified throughout the study corridor for the Proposed Natural Gas Pipeline alignment (Table 4.7-4, Part B includes information on the additional 14 wetlands, *i.e.*, 9J22 through 9J36), along with characteristic features associated within each wetland. For purposes of the following discussion, however, only those wetlands adjacent to, or crossed by, the Proposed Natural Gas Pipeline alignment are included.

Wetlands delineated along the two study corridor segments have been classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.*, 1979). In support of the classification, representative vegetation found within each wetland was identified and recorded on Wetland Summary field forms. Consistent with that classification system, the hydrology of each wetland has also been established.

4.7.4.2.1 Segment 1

Segment 1 is approximately 3.9 miles (20,600 feet) in length. It initially extends along the east side of Route 9J from the TGP No. 200 pipeline in the Town of Schodack to a point in the Town of East Greenbush (approximately 330 feet south of the Town of East Greenbush / City of Rensselaer municipal boundary) where it will turn west and cross under Route 9J, the CSX railroad tracks and a strip of land owned by the Albany Port District Commission.

Forty-four wetlands are associated with Segment 1, many of which consist of roadside drainage ditches designed to channel runoff away from the roadway. All Segment 1

wetlands are considered to constitute 'adjacent' (*i.e.*, not isolated) wetlands subject to USACOE jurisdiction. The majority of wetlands associated with Segment 1 were not delineated in the field in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (USACOE Manual; Environmental Laboratory, 1987) since permission to access private property along Route 9J had not been obtained prior to field investigations. Accordingly, the wetland boundaries associated with these wetlands were determined based on visual observations and GPS readings. As noted above, the USACOE has approved all boundaries of wetlands that will be crossed by the proposed Facility.

However, Wetlands 9J37, C32, Z, and a portion of 9J20 were field delineated in accordance with methods described in the USACOE Manual. Based on these delineation activities, wetland / hydric soil properties associated with wetlands subject to soil sampling were determined to consist of low matrix chromas and such redoximorphic features as mottling, gleying and oxidized rhizospheres.

All except two Segment 1 wetlands, are dominated by Palustrine emergent plant communities (see Table 4.7-4). Wetland 9J40 is dominated by forested communities, while Wetland 9J38 primarily consists of scrub / shrub wetland plant species. Based on Cowardin *et al.*, (1979), Palustrine wetlands include all non-tidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand ("ppt").

In addition to Palustrine wetlands, thirteen of the Segment 1 wetlands also contain Riverine communities. As described by Cowardin *et al.*, (1979), Riverine wetlands include all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens; and

TABLE 4.7-4 SUMMARY OF WETLAND FEATURES ALONG THE PROPOSED NATURAL GAS PIPELINE WETLAND STUDY CORRIDOR
PART A – WETLANDS ALONG FACILITY ALIGNMENT

WETLAND ID	FLAG NUMBERS	LOCATION	DOMINANT COVER TYPE(S)	SURFACE WATERS	PREVIOUSLY MAPPED WETLAND/HYDROLOGY INFORMATION	WETLAND AREA (SF)
SEGMENT 1*						
C32	C32-1 to C32-37	EG	EM/SS	–	FHZ; nwi	16,029
9J1	–	EG	EM	–	FHZ	1,790
9J2	–	EG	EM	–	FHZ	10,623
9J3	–	EG	EM	–	FHZ	1,006
9J4	–	EG	EM	IS	FHZ	12,697
9J5	–	EG	EM	–	FHZ	1,281
9J6	–	EG	EM	–	FHZ	2,684
9J7	–	EG	EM	–	FHZ	246
9J8	–	EG	EM	–	FHZ	3,103
9J9	–	EG	EM/SS	IS	FHZ	1,501
9J10	–	EG	EM	–	FHZ	1,473
9J11	–	EG	EM/SS	–	FHZ	13,434
9J12	–	EG	EM	–	FHZ	11,834
9J13	–	EG	EM	–	FHZ	7,937
9J14	–	EG	EM	–	FHZ	11,330
9J15	–	EG	EM	–	FHZ	8,044
9J16	–	EG	EM	–	FHZ	7,114
9J17	–	EG/R	EM/SS	–	FHZ	3,773
9J20/21	9J20A-1 to 9J20A-8; 9J20B-1 to 9J20B-11	EG	EM	–	FHZ; NWI	37,121
9J37	9J37-1 to 9J37-14; 9J37-A1 to 9J37-A14	S	EM/F	TPS	FHZ; NWI	45,234

NOTE: Key to Table 4.7-4 can be found at the end of the table.

TABLE 4.7-4 SUMMARY OF WETLAND FEATURES ALONG THE PROPOSED NATURAL GAS PIPELINE WETLAND STUDY CORRIDOR (continued)
PART A – WETLANDS ALONG FACILITY ALIGNMENT

WETLAND ID	FLAG NUMBERS	LOCATION*	DOMINANT COVER TYPE(S)	SURFACE WATERS	PREVIOUSLY MAPPED WETLAND/HYDROLOGY INFORMATION	WETLAND AREA (SF)
SEGMENT 1*						
9J38	–	S	SS	–	FHZ	2,621
9J39	–	S	EM/F	–	FHZ	5,118
9J40	–	S	F/SS	IS	FHZ	710
9J41	–	S	EM	–IS	FHZ	8,678
9J42	–	S	EM	–	FHZ	6,292
9J43	–	S	EM	–	FHZ	2,980
9J44	–	S	EM	PS	FHZ	3,209
9J45	–	S	EM	–	FHZ	7,835
9J46	–	S	EM/F	IS	FHZ	5,451
9J47	–	S	EM	–	FHZ	3,735
9J48	–	S	EM	IS	FHZ	3,567
9J49	–	EG	EM	PS	FHZ	9,764
9J50	–	EG	EM	IS	–	34,854
9J50A	–	EG	EM	–	–	4,153
9J51	–	EG	EM	–	–	1,726
9J52	–	EG	EM	PS	FHZ	1,319
9J53	–	EG	EM	–	NWI	15,484
9J54	–	EG	EM	–	–	7,012
9J54A	–	EG	EM	–	–	4,005
9J55	–	EG	EM	IS	NWI	19,920
9J56	–	EG	EM	–	FHZ	12,896
9J57	–	EG	EM	–	FHZ	12,522
9J58	–	EG	EM	–	FHZ	2,474
9J59	–	EG	EM	IS	FHZ	2,042
SUBTOTAL						**376,621**

TABLE 4.7-4 SUMMARY OF WETLAND FEATURES ALONG THE PROPOSED NATURAL GAS PIPELINE WETLAND STUDY CORRIDOR (continued)
PART A – WETLANDS ALONG FACILITY ALIGNMENT

SEGMENT 2*						
Z	Z1-Z16	EG	F	IS	FHZ; NWI	715
Y	Y1-Y26	EG/R	F	–	FHZ; NWI	21,397
X	X1-X8	R	F	–	FHZ; NWI	0
W†	W1-W14	R	F	IS	FHZ; nwi	27,576
I†	Previously Delineated	R	EM/SS	IS	FHZ; NWI	7,560
H	Previously Delineated	R	F/EM	–	FHZ; NWI	4,917
F	Previously Delineated	R	F/EM	–	FHZ; NWI	6,013
SUBTOTAL						**40,008**
TOTAL						**416,629**
WETLAND SUMMARY			**SQUARE FEET**		**ACRES**	
Total Area of Wetlands in the Study Corridor			**416,629**		**9.6**	
Total Area of Study Corridor			**1,128,956**		**25.9**	

TABLE 4.7-4 SUMMARY OF WETLAND FEATURES ALONG THE PROPOSED NATURAL GAS PIPELINE WETLAND STUDY CORRIDOR (continued)
PART B – WETLANDS NOT ASSOCIATED WITH THE FACILITY ALLIGNMENT

WETLAND ID	FLAG NUMBERS	LOCATION	DOMINANT COVER TYPE(S)	SURFACE WATERS	PREVIOUSLY MAPPED WETLAND/HYDROLOGY INFORMATION	WETLAND AREA (SF)
SEGMENT 1*						
9J36	–	S	EM/F	TPS/IS	FHZ; NWI; DEC	160,399
9J35	–	S	F	PS	FHZ; NWI	4,002
9J32/33/34	–	EG/S	EM/F	PS	FHZ; NWI; DEC	219,319
9J31	–	EG	EM	–	FHZ; NWI; DEC	114,773
9J31A	–	EG	F	PS	FHZ	1,364
9J30	–	EG	EM	–	FHZ; NWI; DEC	57,159
9J29	–	EG	EM	–	FHZ; NWI; DEC	21,708
9J28	–	EG	F/EM	–	FHZ; NWI	2,048
9J27	–	EG	F	–	FHZ; NWI	71
9J26	–	EG	F	–	FHZ; NWI	20
9J25	–	EG	F	IS	FHZ; NWI	856
9J24	–	EG	EM/SS	IS	FHZ; nwi; DEC	17,520
9J23	–	EG	EM/SS	IS	FHZ	172
9J22	–	EG	EM	PS	FHZ; nwi	9,862
TOTAL						**609,373**
WETLAND SUMMARY			**SQUARE FEET**		**ACRES**	
Total Area of Wetlands in the Study Corridor			**609,373**		**14.0**	
Total Area of Study Corridor			**1,415,040**		**32.5**	

Key to Table 4.7-4

* Segment 1 wetlands occur both east and west of Route 9J from the existing Tennessee gas line to a point approximately 330' south of the East Greenbush/Rensselaer municipal boundary. Segment 2 wetlands occur west of the CSX rail line northward to the BEDCO Power Plant site. With the possible exception of wetland 9J20/21, none of the Segment 1 wetlands on the west side of Route 9J will be impacted by the Facility.

† Although delineated at two different times, Wetlands I and W actually constitute a single wetland and for the purposes of this discussion are counted as one wetland.

Location

S = Town of Schodack
EG = Town of East Greenbush
R = City of Rensselaer

Dominant Cover Type:

F = Forested
SS = Scrub/Shrub
EM = Emergent

Surface Water

– = None
IS = Intermittent Stream
PS = Perennial Stream
TPS = Freshwater Tidal Perennial Stream

Previously Mapped Wetland / Hydrology Information

– = None
FHZ = Federal Emergency Management Agency Mapped 100-Year Flood Hazard Zone
DEC = New York Department of Environmental Conservation Mapped Wetlands
NWI = National Wetlands Inventory Mapped Wetlands
nwi = Portions of this Wetland were Mapped by the National Wetlands Inventory

(2) habitats with water containing ocean-derived salts in excess of 0.5 ppt. Four of the wetlands associated with Segment 1 contain perennial streams (e.g., Wetland 9J36 (Papscanee Creek) and Wetland 9J37 (*Vierda Kill*)), with nine wetlands containing intermittent waterways. The majority of channel widths range from approximately 2' - 5', although larger stream channels ranging from approximately 6' - 10'+ wide also are present. All of these waterways are tributary to Papscanee Creek, located west of Route 9J.

Ditches / swales also occur within several Segment 1 wetlands. Other hydrologic indicators associated with Segment 1 wetlands include inundation / saturation, drainage patterns, surface scouring, silt deposition and water-stained leaves.

As noted above, the majority of Segment 1 wetlands consist of plant communities dominated by Palustrine emergent plant communities. The most abundant plant species associated with these wetlands include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) and broad-leaved cattail (*Typha latifolia*), although narrow-leaved cattail (*Typha angustifolia*), jewelweed (*Impatiens capensis*), Joe-pye-weed (*Eupatorium maculatum*) and scattered elms (*Ulmus americana*) also are present. Scrub / shrub communities (e.g., Wetland 9J38) are dominated by cottonwood (*Populus deltoides*), elm, box elder (*Acer negundo*), common buckthorn (*Rhamnus cathartica*), willow (*Salix* sp.) and silky dogwood (*Cornus amomum*), as well as common reed, purple loosestrife and cattail. Plant species associated with Segment 1 forested wetlands include cottonwood, silver maple (*Acer saccharinum*), elm, green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), common buckthorn, silky dogwood and common reed.

NYSDEC-designated wetlands are associated with six Segment 1 wetlands that are not within the proposed Facility alignment (see Table 4.7-1, Part B). All of these wetlands

comprise a portion of the NYSDEC wetland designated EG-1 (see, Figure 4-1) and are located west of Route 9J and south of the Facility's crossing of Route 9J, the CSX rail line and the Albany Port District Commission land. In contrast, the Proposed Natural Gas Pipeline will be installed along the east side of Route 9J to a point north of all State-designated wetlands. Accordingly, no NYSDEC-designated wetlands will be affected by Segment 1 construction activities.

4.7.4.2.2 Segment 2

Six wetlands occur along this segment of the Proposed Natural Gas Pipeline route. From south to north, these wetlands include Wetlands Z, Y, X, I / W,[5] H and F. None of these, however, constitute an isolated wetland. Although Wetlands Y and X presently are isolated (*i.e.*, exhibit no inlet or outlet and are not hydrologically linked to any other waters / wetlands), available mapping and site-specific observations indicate that, prior to site disturbance, there was a hydrologic connection between these wetlands and other wetlands located adjacent to surface waters. Accordingly, all Segment 2 wetlands are considered adjacent wetlands subject to USACOE jurisdiction.

As previously noted, only Wetlands Z, Y, X and a portion of W were field delineated in accordance with methods described in the USACOE Manual. At the request of the owner, no soil samples were taken or flagging conducted on the Petroleum Fuels Inc. property. Consequently, the wetland boundaries associated with this property were based on observations and GPS readings. Also, since Wetlands F, H and I previously were delineated

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5 Although delineated at two different times, Wetlands I and W actually constitute a single wetland. It is referenced herein as Wetland I / W except in text that discusses the wetland delineation process or different characteristics of the two parts.

by ENSR International in conjunction with earlier activities related to the Projects, site-specific wetland delineations were not conducted as part of the present effort. As noted above, these wetland boundaries have been approved pursuant to USACOE Permit Application Number 2001-00813-YN, Letter of Determination dated 14 May 2003, and as also noted above, the remaining Segment 2 wetland boundaries were approved pursuant to USACOE Permit Application No. 2003-00388-YN, Letter of Determination dated 02 October 2003).

Based on overall field investigations, Palustrine forested and emergent plant communities are most abundant. Within these wetlands, soils primarily include Udorthents, sandy. For the most part, however, Wetland Y consists of soils belonging to the Fluvaquents-Udifluvents complex. These deep, somewhat poorly drained to very poorly drained soils occur on floodplains and are saturated for at least some portion of the year (SSRC, 1988). As noted in Section 4.7.4.2.1, wetland / hydric soil properties associated with wetlands subject to soil sampling consist of low matrix chromas and such redoximorphic features as mottling, gleying and oxidized rhizospheres. Wetland / hydric soils associated with Wetlands H and I also are characterized by low matrix chromas and such redoximorphic features as mottling and gleying (ENSR International *Wetland Delineation Report;* December 2001). Hydrologic indicators associated with Segment 2 wetlands include inundation / saturation, drainage patterns, surface scouring and water-stained leaves.

Wetlands Z, X and W primarily are forested, while Wetlands Y, H and F predominantly consist of both forested and emergent plant communities. Wetland I, for the most part, exhibits emergent and scrub / shrub vegetation. Within the forested portions of these wetlands, cottonwood and black willow (*Salix nigra*) are common canopy species, with common buckthorn and silky dogwood prevalent in the understory. Scrub / shrub and

emergent communities primarily are composed of silky dogwood, common reed, purple loosestrife and cattail.

Riverine wetlands are only associated with Wetlands Z, and I / W. These intermittent waters flow in a westerly direction and, ultimately, are discharged to the Hudson River via a series of culverts. Only a portion of the stream associated with Wetland I / W, however, is located within the Route 9J gas line construction corridor. No NYSDEC-designated wetlands are associated with Segment 2.

4.7.4.3 Wetland Functions / Values

As a means to characterize and predict the functions and values of the wetlands along the route of the proposed Facility, a descriptive approach was implemented. This approach follows the guidelines of the "Highway Methodology" ("HM") developed by the New England District of the USACOE for assessing wetland impacts potentially resulting from highway projects (USACOE, 1999). The HM is an approach that includes qualitative descriptions of the biological and physical characteristics of wetlands and identifies the functions and values exhibited and the basis for conclusions using "best professional judgment". Originally developed to assess wetland impacts resulting from highway projects, the HM is frequently used for other types of projects where characterization of wetland resources is necessary for Section 404 permit requirements.

Field investigations associated with wetlands along the Proposed Natural Gas Pipeline alignment were conducted during the summer and fall of 2002, the winter of 2002 / 2003 and the spring of 2003. At these times, site-specific wetland data were collected, including information pertaining to vegetation and hydrology characteristics, wetland type, setting in the landscape, and other characteristics. This collective database was used to evaluate the

functions and values associated with wetlands to which temporary and permanent impacts would result from gas pipeline installation / construction.

As defined in the HM, functions are self-sustaining ecological properties of a wetland ecosystem that exist in a natural setting. Functions result from both living and non-living components of a wetland. These include all processes necessary for the self-maintenance of the wetland ecosystem such as primary production and nutrient cycling. Functions relate to the significance of wetland properties without regard to subjective human values.

Values are benefits that derive from either one or more functions and the physical characteristics associated with a wetland, *i.e.*, recreation, education / scientific value, uniqueness / heritage, visual quality / aesthetics and endangered species habitat. The value of a particular wetland function or combination of functions is based on human judgment of the worth, merit, quality, or the importance attributed to those functions. Functions and values can be "principal" if they are an important physical component of a wetland ecosystem (function only) and / or are considered of special value to society from a local, regional, or national perspective.

None of the wetlands to be permanently affected by the proposed Facility installation / construction exhibit any of the above-referenced values. However, these areas do exhibit a variety of wetland-related functions.

Table 4.7-5 summarizes the expected functions of each wetland where permanent impacts will result from installation / construction of the Proposed Natural Gas Pipeline. In this regard, it should be noted that the proposed Facility will not result in the loss of wetlands. Rather, permanent wetland impacts will be limited to the conversion of some forested wetland areas (approximately 0.4 acres) to emergent and scrub / shrub communities (see

Table 4.7-5). More specifically, these impacts to forested wetlands will be associated with a 20-foot wide corridor in which the vegetation will be subject to periodic but permanent maintenance. The Proposed Natural Gas Pipeline route's use of a former railroad bed / spur across the southern edge of the BEDCO Power Plant site will help minimize these permanent impacts to Wetland H. Table 4.7-5 includes only those wetlands in which permanent forested wetlands will be converted to scrub / shrub or emergent wetlands. Supporting documentation identifying the functions referenced in Table 4.7-5 is provided in Table 4.7-6.

In general, all of the subject wetlands function with respect to groundwater recharge / discharge, floodflow alteration, production export and wildlife habitat. In contrast, sediment toxicant retention, nutrient removal and sediment / shoreline stabilization is limited to Wetlands Z, I and 9J40, *i.e.*, wetlands containing surface water features. While all wetlands identified in Tables 4.7-5 and 4.7-6 have been subject to past disturbance, Wetlands Y, W, H and F are generally cut off from surface waters.

Additionally, although containing surface waters, Wetlands Z, I and 9J40 are not expected to provide fish and shellfish habitat due to the intermittent nature of stream flow in Wetlands I and 9J40 and the small size and shallow depth of the waterway in Wetland Z.

Table 4.7-5 Wetland Functions and Values (Summary)

Wetland ID	Functions and Values						
	Groundwater Recharge Discharge	Floodflow Alteration	Sediment/ Toxicant Retention	Nutrient Removal	Production Export	Sediment Shoreline Stabilization	Wildlife Habitat
Z	x	X	x	x	x	x	x
Y	x	X			x		x
I / W	x	X			x		x
H	x	X			x		x
F	x	X			x		x
9J40	x	x	x	x	x	x	x

4.8 Soils

4.8.1 Introduction

The soils types along the Proposed Natural Gas Pipeline route and surrounding land were identified from the Soil Survey of Rensselaer County (Natural Resource Conservation Service, 1988). In total, the Proposed Natural Gas Pipeline crosses twelve United States Department of Agriculture ("USDA") Soil Survey Map units representing nine soil series and sandy Udorthents. This section describes the soils encountered by the proposed route of the Facility.

4.8.2 Soils Along the Route

This section describes the soils encountered by the Proposed Natural Gas Pipeline route.

Table 4.7-6 Wetland Functions and Values

Wetland ID	Forested Wetland Converson to Emergent / Scrub Shrub Wetland (SF / Acres)	Streams**	Functions and Values - Considerations and Qualifiers*							Function and Values	Principle Function(s) / Value(s)***	Comments
			Groundwater Recharge Discharge	Floodflow Alteration	Sediment/ Toxicant Retention	Nutrient Removal	Production Export	Sediment Shoreline Stabilization	Wildlife Habitat			
Z	715 / <0.02	PS	5,7	5,6,7,8,13	1,2,10	3,4,10,11	1,2,10	3,4,9	6,7,8	GW R/D, FFA, STPR, NRRT, PE, SSS, WH	N	Soil does not contain a Fragipan, assumed permeable
Y	4,772 / 0.11	-	5	5,6,8	17	15	1,2	16	7,8	GW R/D, FFA, PE, WH	N	Soil does not contain a Fragipan, assumed permeable. Wetland not associated with stream, presumed to not provide sediment/toxicant retention, sediment shoreline stabilization, and nutrient removal
I / W	4,308 / 0.10	IS	5	5,6,8	1,2,3,10,16	3,4,8,9,10	1,2	3,4,7,9,12,15	6,7,8	GW R/D, FFA, PE, WH	N	Soil does not contain a Fragipan, assumed permeable.
H	4,917 / 0.11	-	5	5,6,8,18	17	15	1,2,7	16	7,8,13	GW R/D, FFA, PE, WH	N	Wetland not associated with stream, presumed to not provide sediment/toxicant retention, sediment shoreline stabilization, and nutrient removal
F	1,675 / 0.04	-	5	5,6,10	17	15	1,4	16	7,8	GW R/D, FFA, STPR, PE, WH	N	Site disturbed, no direct connection to surface water, inflow/outflow partially cut off, assumed to not provide sediment toxicant reduction function. Wetland not associated with stream, presumed to not provide sediment shoreline stabilization.
9J-40	710 / <0.02	IS	5	5,6,13,18	1,2,3,10,16	3,8,9,10	1,7,10	3,4,9,12	6,7,8,13	GW R/D, FFA, STPR, NRRT, PE, SSS, WH	N	Soil does not contain a Fragipan, assumed permeable

Table 4.7-6 Wetland Functions and Values

Wetland Evaluation Supporting Documentation*

Groundwater Recharge / Discharge (GW R / D)

5 Fragipan does not occur in the wetland
7 Wetland is associated with a perennial or intermittent stream

Floodflow Alteration, Storage & Desynchronization (FFA)

5 Wetland contains hydric soils which are able to absorb and detain water
6 Wetland exists in a relatively flat area that has flood storage potential
7 Wetland has an intermittent outlet, ponded water, or signs are present of variable water level
8 During flood events, this wetland can retain higher volumes of water than under normal or
13 This wetland is associated with one or more watercourses
15 The wetland outlet is restricted
18 This wetland contains a high density of vegetation

Sediment / Toxicant / Pathogen Retention (STPR)

1 Potential sources of excess sediment are in the watershed above the wetland
2 Potential or known sources of toxicants are in the watershed above the wetland
3 Opportunity for sediment trapping by slow moving water or deepwater habitat are present in
10 Wetland is associated with an intermittent or perennial stream or a lake
13 No indicators of erosive forces are present. No high water velocities are present
16 Dense vegetation provides opportunity for sediment trapping and/ or signs of sediment
17 Other, **See comments**

Nutrient Removal / Retention / Transformation (NRRT)

3 Overall potential for sediment trapping exists in the wetland
4 Potential sources of excess nutrients present in the watershed above wetland
8 Dense vegetation is present
9 Emergent vegetation and/ or dense woody stems are dominant
10 Opportunity for nutrient attenuation exists
11 Vegetation diversity/ abundance sufficient to utilize nutrients
13 Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation
15 Other, **See comments**

Production Export - Nutrient (PE)

1 Wildlife food sources grow within this wetland
2 Detritus development is present within this wetland
7 High vegetation density is present
10 Nutrients exported in wetland watercourses (permanent outlet present)

Sediment / Shoreline / Stabilization (SSS)

3 Potential sediment sources are present up-slope
4 Potential sediment sources are present upstream
7 Wide wetland (>10') borders watercourse, lake or pond
9 The watershed is of sufficient size to produce channelized flow
12 Dense vegetation is bordering watercourse, lake, or pond
15 Vegetation is comprised of a dense resilient herbaceous layer that stabilizes sediments and the shoreline on a small scale (inches) during minor flood events
16 Other, **See comments**

Wildlife Habitat (WH)

6 Wetland is contiguous with other wetland systems connected by a watercourse or
7 Wildlife overland access to other wetlands is present
8 Wildlife food sources are within this wetland or are nearby
13 Density of the wetland vegetation is high

Streams**	
PS	Perennial
IS	Intermittent
D / S	Ditch/Swale

Principle Function(s) / Value(s)***	
N	No principal function or value provided

Table 4.8-1 details the physical characteristics of these soil types including drainage class, slope, and depth to bedrock and Figure 4-3 shows the distribution of the soil units. An understanding of these characteristics is instrumental in assessing potential construction challenges, such as erosion control and difficult installation conditions. For example, the installation of the Proposed Natural Gas Pipeline may require blasting in areas with shallow bedrock, while steeper slopes would make soils more susceptible to erosion.

Contact was made with the Rensselaer County Soil and Water Conservation Service ("County SWCS") to determine whether any of the soils that would be crossed by the proposed project would constitute "highly erodable" soils. Mr. Tom Sanford of the County SWCS indicated that no map existed of such soils but that any soil with a slope higher than 5% would be considered highly erodable. Table 4.8-1 identifies these areas with slopes greater than 5% as well as soil types with shallow bedrock and a high potential for erosion. Each of the Facility area soil types is described below. Figure 4-7 ("Soil Limitations") provides a depiction of the areas along the proposed Facility route where soils and slopes might impact its construction.

Bernardston-Nassau complex (BnD)

The Bernardston-Nassau soil complex is composed of 45% Bernardston soil, 30% Nassau soil, and 25% other soils. Bernardston soils are deep, well drained soils developed in glacial tills comprised of shale, slate, and sandstone materials. Nassau soils are shallow, somewhat poorly drained, and derived from glacial tills comprised of shale and slate materials. The complex is found in uplands where the topography is dictated by underlying shale and slate bedrock.

Fluvaquents-Udifluvents complex (FlA)

Fluvaquents are deep, somewhat deep poorly drained soils to very poorly drained soils formed in recent alluvium. Udifluvents are similar but are better drained soils ranging from well to moderately well drained soils. The Fluvaquents consist of 45% of the complex occurring in the lower areas while Udifluvents consist of 35% of the complex in the higher areas. Both soils are too variable to have a typical profile.

Hudson series (HuC, HuD, HuE)

Hudson soils are deep and moderately well drained. Derived from lacustrine silt and clay, they are found on dissected lake plains. The surface layer is a silt loam extending 5 inches deep, while the subsoil of silty clay reaches 28 inches deep. The substratum is also silty clay and extends deeper than 60 inches.

Limerick Series (LmA)

Limerick series soils are deep, poorly drained soils. Typically found on flood plains, they are derived from alluvial deposits of silt and very fine sand. The surface layer of silt loam is 8 inches thick, while the substratum of very fine sandy loam extends beyond 60 inches in depth.

Nassau-Manlius complex (NaC)

The soils of this complex occur on gently sloping ridges underlain by shale or slate bedrock. The texture of the surface is a slaty loam to a very shaly silt loam. Bedrock is at a depth of 10 to 20 inches in Nassau and 20 to 40 inches in Manlius soils. The complex is 45%

Nassau and 30% Manlius soils, and 25% other soils. These soils formed in glacial outwash derived mainly of shale and slate.

Riverhead Fine Sandy Loam (RkC)

Riverhead soils are deep and well-drained soils found on glacial outwash plains, terraces, and remnant beaches. They are derived from glacial outwash deposits comprised of slate, sandstone, and granite materials. The surface layer of fine sandy loam is 6 inches deep, and sandy loam makes up the subsoil layer, which extends 35 inches deep. The substratum is a gravely sandy loam that reaches depths of 60 or more inches.

Udorthents, sandy (Ud, Ue)

This soil consists of sandy soils that were dredged from the Hudson River. The material is pilled into small knolls or knobs. The soils are very deep and moderately well drained. The soil profile is too variable to have a typical profile.

Saprists and Aquents, Ponded (Sa)

Saprist soils are very poorly drained organic soils that are ponded with water for much of the year. They are made up of well-decomposed organic soil that varies in depths from 16 to greater than 60 inches. The mineral layer beneath the organic layer ranges from silty clay loam to gravelly loamy sand.

Teel Series (TeA)

Soils of the Teel series are deep and moderately well drained. They are derived from recent alluvium and are found on flood plains. Silt loam makes up the surface layer, which is 12

inches thick. The silt loam subsoil reaches a depth of 40 inches and the substratum, also a silt loam, reaches depths of 60 inches or more.

4.8.3 Impacts and Mitigation

Construction and maintenance activities will disturb soils within the Proposed Natural Gas Pipeline ROW, although this will be minimized due to the construction of the majority of the pipeline in the Route 9J ROW. Erosion, rutting, and compacting of soils may result from the movement of heavy equipment, clearing, and access road construction, primarily in new ROW.

If bedrock is encountered during excavation, ripping or hammering equipment will be used to remove the rock wherever possible. If required, blasting will be employed to the required depth utilizing the minimum charge required to break up the rock. A shallower burial depth of the proposed Facility will be used in areas where blasting is required to reduce the amount of blasting required. A pre-blast survey will be carried out to identify the appropriate charge. Steel mesh mats will be used to prevent scattering of rock or debris. Blasting will be carried out in accordance with all state or federal regulations that apply to utility installations.

Maintenance practices on the ROW will allow re-vegetation of the ROW with low bush and small trees to stabilize the surface. Unauthorized access by off road vehicles will be limited with obstructions at access roads such as boulders or locked gates.

Table 4.8-1 Facility Site Soils and General Characteristics

Soil Series (Map Unit)	Drainage Class	Depth to Bedrock (Inches)	Depth to Seasonally High Water Table (Feet)	Parent Material	Range of Slopes (%)	Construction Considerations
Bernardston-Nassau complex (BnD)	Well Drained	>60	1.5 to 2.0	Glacial Till	15 – 25	Wetness and slope
Fluvaquents-Udifluvents complex (FlA)	Very Poorly Drained to Moderately Well Drained	>60	Varies, often subject to flooding	Recent Alluvium	0 – 3	Wetness
Hudson Series (HuC, HuD, HuE)	Moderately Well Drained	>60	1.5 to 2.0	Glacial Lake Sediment	3 – 8	Wetness
Limerick Series (LmA)	Poorly Drained	>60	0.5-1.5	Alluvial Deposits	0 – 3	High Water Table / Periodic Flooding
Nassau-Manlius complex (NaC)	Excessively Drained to Well Drained	10 - 40	Varies, Dependent on soil series	Glacial Till	1 – 15	Depth to bedrock
Riverhead Fine Sandy Loam (RkC)	Well Drained	>60	> 6.0	Glacial Outwash	0 – 15	Cut banks cave
Udorthents, sandy (Ud, Ue)	Excessively Drained to Moderately Well Drained	Variable	Variable	Variable / Till or Recent Alluvium	0 – 5	Variable
Udorthents, sandy (Ud, Ue)	Excessively Drained to Moderately Well Drained	Variable	Variable	Variable / Till or Recent Alluvium	0 – 5	Variable
Saprists and Aquents, Ponded (Sa)	Very Poorly Drained	>60	0	Variable	0 – 1	Flooding: Severe

Source: SCS. 1988. Soil Survey of Rensselaer County, New York

FIGURES

4.9 Visual, Noise, Air Impacts

4.9.1 Visual

The Proposed Natural Gas Pipeline will have minimal visual impact. The proposed Facility will be buried underground, and located within or adjacent to an existing roadway ROW (Route 9J) that extends for the majority of the Proposed Natural Gas Pipeline route. The remainder of the route is primarily located in existing industrial property in areas with limited public access. Pipeline markers will be installed along the route in accordance with 16 NYCRR § 255.707.

Potential long-term impacts associated with permanent ROW clearing in each town or municipality will be insignificant. Temporary visual impacts will occur during construction as would be expected from any construction activity.

The new gate station will include a fenced area with the piping / valves and metering facilities, and potentially a small control house for that metering equipment in addition to an odorization tank and pumping equipment. The proposed gate station site is located off the highway ROW in an area of no pedestrian traffic. The site size will be approximately 200 feet by 200 feet and will be landscaped and visible from Route 9J for only a brief distance.

A valve site will be located north of the Hays Road intersection with Route 9J. This valve site will include a 10-foot by 40-foot fenced area with valve stem and valve facilities. A typical valve site design diagram is included as Figure 5-3 of Exhibit 5. If a second valve site is required near the CSX rail crossing, it would be of a comparable design.

The new GLM station to be constructed at the BEDCO Power Plant site will be located in a central location of the site. The new GLM station will be approximately 65 feet by 150 feet and will be enclosed by fencing. The GLM station will be low profile, consisting primarily of pipes, meters and valve assemblies protruding from the ground. Its location will result in no independent off-site impacts, as it will blend into the larger BEDCO Power Plant. From most locations off site, the cooling towers will also shield the GLM station.

No visually sensitive resources were identified within a one-mile corridor surrounding the proposed pipeline. While NYSDEC Program Policy[6] for assessing and mitigating visual impacts recommends a five mile radius, a visual impact radius of one-mile was deemed sufficient since the Proposed Natural Gas Pipeline will be buried underground. No adverse aesthetic impacts to sensitive places will occur as a result of the Facility installation and gate station construction and modifications.

4.9.2 Air Quality

No significant impact to air quality is expected as a result of the construction and operation of the Proposed Natural Gas Pipeline. Once in operation, the Proposed Natural Gas Pipeline will not emit air pollutants that will exceed the New Source Performance Standards, National Ambient Air Quality Standards, Prevention of Significant Deterioration increments, and / or applicable state standards or regulations.

Construction related impacts to air quality are not expected to be significant as they will be temporary. Emissions due to construction machinery would not affect long-term ambient

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6 DEC Program Policy Assessing and Mitigating Visual Impacts, Issuing Authority: Articles 8 and 49, 7/31/00.

air quality. During aboveground construction, dust generation from construction will be minimized as appropriate and in accordance with all applicable permit requirements and the EM&CS&P.

4.9.3 Noise

The Proposed Natural Gas Pipeline project does not include any facilities that would produce major sources of noise as described in the DEC Program Policy Articles 3, 8, 23 & 27.[7] Construction activities will produce temporary noise impacts. Pursuant to policies within the EM&CS&P, construction equipment will be muffled and maintained to avoid producing excessive noise. Construction equipment will not be permitted to idle unnecessarily. All efforts will be made to mitigate noise impact on sensitive sites. PowerCo will obtain and comply with all state and federal requirements relative to noise impact avoidance and mitigation.

4.10 Historical and Archaeological Resources

A Phase 1 Cultural Resources Survey has been conducted by John Milner Associates, Inc. ("JMA") based on the Proposed Natural Gas Pipeline route and is included in Exhibit __ (JIK-1). As the majority of the Proposed Natural Gas Pipeline is to be built within the previously disturbed Route 9J ROW, the Survey concludes that "[n]o additional cultural resources work is recommended in association with the proposed route."

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7 NYSDEC Program Policy Assessing and Mitigating Noise Impacts, Issuing Authority: Environmental Conservation Law Articles 3, 8, 23 and 27, Issuance Date Oct 6, 2000, Revised Feb.2, 2001.

4.11 Literature Cited / References

References cited in this exhibit are listed below. Copies of letters and other communications listed below are included in Exhibit ___ (RPR-1).

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Exhibit 5

EXHIBIT 5

DESIGN INFORMATION

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

EXHIBIT 5 – DESIGN INFORMATION **5-1**

5.1	Introduction	5-1
5.2	General Description of Proposed Natural Gas Pipeline	5-1
5.3	Pipeline Integrity	5-4
5.4	Proposed Natural Gas Pipeline Tie-In at New Gate Station, Town of Schodack	5-5
5.5	Pipeline Tie-In at New GLM Station	5-6
5.6	Pipeline Valves	5-6
5.7	Galvanic Anode / Impressed Current	5-7

LIST OF FIGURES

Figure 5-1 Typical Interconnection Drawing – New Gate Station

Figure 5-2 Proposed GLM Design

Figure 5-3 Typical Valve Site Design

Figure 5-4 Proposed 16" Natural Gas Pipeline Rte 9J & CSX Rail Crossing

Figure 5-5 Proposed 16" Natural Gas Pipeline Port Access Highway Crossing

EXHIBIT 5 – DESIGN INFORMATION

5.1 Introduction

This section defines the design of the proposed Besicorp-Empire Power Company LLC ("PowerCo" or "Applicant") natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility"), including typical design drawings of the new gate station (see Figure 5-1, *Typical Interconnection Drawing – New Gate Station*) and the gas large meter ("GLM") station (see Figure 5-2, *Proposed GLM Design*). The Proposed Natural Gas Pipeline will contain one valve site[1] (see Figure 5-3, *Typical Valve Site Design)* in addition to those associated with the tap at the new gate station and the GLM station at the proposed Besicorp-Empire Development Company, LLC's ("BEDCO") cogeneration power plant ("BEDCO Power Plant"). The valve site will be located in the Town of East Greenbush at the approximate middle point of the Proposed Natural Gas Pipeline, just north of Hays Road. Construction drawings identifying the location(s) of the valve site(s) have been provided along with this Application.

5.2 General Description of Proposed Natural Gas Pipeline

The Proposed Natural Gas Pipeline will begin at a tap point on Tennessee Gas Pipeline's ("TGP") 24-inch high-pressure transmission pipeline No. 200 near its crossing of Route 9J in the Town of Schodack and will generally follow Route 9J and a short new easement for approximately 4.5 miles to a new GLM station at the BEDCO Power Plant site. The

---

[1] As explained in Exhibit 2, a second valve site might be required near the crossing of the CSX rail line. Final details as to the need for this valve site will be developed. Should this valve site be required, it will also consist of a fenced area with valve stem and valve facilities.

Proposed Natural Gas Pipeline will be located within the Towns of Schodack and East Greenbush and the City of Rensselaer.

Subchapter C, Part 255 of Title 16 of the NYCRR requires that a designation be given to a specified area (class location) surrounding gas piping based on certain criteria including the number of buildings intended for human occupancy and their proximity to the pipeline. 16 NYCRR § 255.5. These Class locations (1 through 4) are used to determine the maximum test and maximum operating pressure limits as well as construction restrictions for the piping. The Proposed Natural Gas Pipeline will be designed to a Class 3 location for its entire length.

The Facility will be fabricated with a minimum of APL 5L Grade X-65 steel and will be 16 inches in diameter, with a minimum wall thickness of 0.375". It will be coated, cathodically protected and designed for a maximum allowable operating pressure of 900 pounds per square inch gauge ("psig").

The route of the Proposed Natural Gas Pipeline will primarily follow an existing state roadway (Route 9J) right-of-way ("ROW"). The Proposed Natural Gas Pipeline will generally travel north from the TGP ROW that contains TGP's No. 200 transmission line in the Town of Schodack, through a new gate station, to be constructed on a parcel of land abutting Route 9J just north of the TGP ROW. The route will exit the parcel and head northward along the east side of the Route 9J ROW to a point approximately 330 feet south of the Town of East Greenbush / City of Rensselaer municipal boundary where it will turn west and pass under Route 9J, the CSX railroad and a strip of land owned by the Albany Port District Commission. (Figure 5-4, *Proposed 16" Natural Gas Pipeline Route 9J and CSX Rail Crossing* provides a depiction of the crossing under Route 9J and the CSX

railroad.) The Facility will be placed in a construction easement within the Route 9J ROW but will require new easements along the northern approximately 850 feet before passing under Route 9J and for passing under the CSX rail line and the Port of Albany District Commission land. The Proposed Natural Gas Pipeline will then turn north, paralleling the CSX rail line, cross four industrially-zoned parcels in a new easement, enter the City of Rensselaer and proceed to the BEDCO Power Plant site.

Upon entering the BEDCO Power Plant site, the proposed Facility will head west along the southern edge of the site following an old railroad spur, cross the Port Access Highway near its intersection with Riverside Avenue (see Figure 5-5, *Proposed 16" Natural Gas Pipeline Port Access Highway Crossing*) and enter and follow the electric ROW for the BEDCO Power Plant. The Proposed Natural Gas Pipeline will terminate at a new GLM station in the central portion of the BEDCO Power Plant site. Figure 2-1 (Exhibit 2) illustrates the proposed route and a more complete description of the route is set forth below.

The Proposed Natural Gas Pipeline will be buried at a minimum depth of thirty-six inches except in areas of bedrock, where the depth of burial will be a minimum of twenty-four inches as required by 16 NYCRR § 255.327. All installations under railroads and state roads shall be under 60 inches of cover.

There will be no compressor stations on the Proposed Natural Gas Pipeline route and as previously explained, at least one valve site will be installed approximately mid-way along the route.

Pipeline markers will be installed along the route in accordance with the 16 NYCRR § 255.707.

5.3 Pipeline Integrity

The Proposed Natural Gas Pipeline will be designed and built to accommodate internal inspection technology that supports the new proposed federal regulations regarding pipeline integrity (49 CFR Part 192.763). The new regulations propose to mitigate and minimize the consequences of failure, maximize the reliability of the system, and accommodate the technology currently available to detect anomalies. The Proposed Natural Gas Pipeline will address these issues as follows:

- The pipe will be of sufficient wall thickness, strength and material grade to minimize stress levels. Valves and controls will be installed at the new gate station and at the GLM station adjacent to the BEDCO Power Plant to detect and control the release of gas in the unlikely event of a failure. Cathodic protection and state-of-the-art pipe coating will be employed to minimize the potential for corrosion.

- The Proposed Natural Gas Pipeline will be serving one end-user and does not interconnect with other transmission or distribution systems. As such the Proposed Natural Gas Pipeline will have no adverse impact on any other system.

- The Proposed Natural Gas Pipeline will be constructed with the latest technology and will employ design features to allow use of an instrumented internal inspection device for early detection and treatment of flaws and defects. The material specified will be resistant to the propagation of crack growth and brittle failure. There will be chemical and physical tests performed on the raw material and rolled pipe prior to delivery to ensure that the quality of the material meets the strict criteria set forth in the design. As all welding is on pipe of greater than 2 inches in diameter, it will be examined through the use of x-ray techniques and all deficiencies will be remedied or removed. The pipe

will receive several pre-service inspections for defects after installation, including coating defect inspection, over the ditch inspection, internal inspection using a caliper pig and hydrostatic testing to a minimum of one and one half times the maximum operating pressure.

In summary, the Proposed Natural Gas Pipeline will meet all federal, state and local requirements for construction and operation. It will be capable of providing reliable service to the BEDCO Power Plant and its proposed peak day natural gas requirements of 125,000 dekatherms ("dth") and annual natural gas requirements of up to 43 million dth.

5.4 Proposed Natural Gas Pipeline Tie-In at New Gate Station, Town of Schodack

The natural gas supply for the Proposed Natural Gas Pipeline will be delivered from TGP at a new gate station (see, e.g., Figure 5-1). The new gate station will be constructed on a parcel of land abutting Route 9J in the Town of Schodack, Rensselaer County, just north of the TGP ROW that contains TGP's No. 200 transmission line.

The Proposed Natural Gas Pipeline will originate at an insulated joint at the new gate station at a transition point from TGP property to PowerCo's property. The new gate station will include a fenced area approximately 200' by 200' with the piping / valves and metering facilities, regulation, odorization pumping systems and odorant storage tank, relief capacity, remote telemetering, etc. and potentially a small control house for that metering equipment. Personnel protection will include a zinc grounding grid and associated test stations. The grounding grid will extend three feet beyond the fencing and all above-ground piping.

5.5 Pipeline Tie-In at New GLM Station

The GLM station will include filter separator inlet and outlet valves, bypass valves, a Supervisory Control and Data Acquisition ("SCADA") building, and regulation and metering equipment (*see*, Figure 5-2). The entire GLM station will be fenced with lockable gates. Personnel protection will include a zinc grounding grid and associated test stations. The grounding grid will extend three feet beyond the fencing and all above-ground piping. Details of the GLM station will be provided to the NYSPSC staff for review and approval after final design drawings are completed prior to construction.

5.6 Pipeline Valves

In addition to the valves at the origination and termination points of the Proposed Natural Gas Pipeline, at least one 16-inch valve nest will be located along the proposed Facility route at a location and spacing according to 16 NYCRR § 255.179. The function of this valve is to control the flow of gas for operation, maintenance or emergency conditions. The location of the valve site is shown on the construction drawings that have been submitted along with this Application.

As shown on Figure 5-3, each pipeline valve has a bypass line with two blow-down valves, one on each side of the pipeline valve. If the final location of this valve falls in an area where overhead electric transmission facilities exist, an additional blow-down valve would be included. In the unlikely event that the Proposed Natural Gas Pipeline must be depressurized and taken out of service, the function of these valves is to release, to the atmosphere, gas enclosed in the section of the Facility between two closed pipeline valves. The two blow-down valves service the pipeline sections on either side of the pipeline valve. The gas will be released to the atmosphere through a buried pipe from the bypass line. At

certain valve nests, a buried insulating joint will be installed in the pipeline. The function of this joint is to electrically section the pipeline as necessary for the cathodic protection of the pipeline.

An above-ground test station will monitor the maintenance of cathodic protection by way of test wires connected to the insulating joint and pipeline. In order to conform to 16 NYCRR § 255.185 accessibility requirements, the valve nest containing the pipeline valve, blow-down valves and the insulating joint will be located a minimum of 60 feet off the centerline of the nearest road. This proximity to roads will allow for easy and immediate access. Each valve nest is enclosed with a 10' by 40' standard station fence.

A grid grounding system will be installed under the valve nest and regulator station to a distance several feet beyond the valve nest boundaries. This system will protect personnel from induced ground fault currents resulting from contact with the valve operators or fencing.

5.7 Galvanic Anode / Impressed Current

The Proposed Natural Gas Pipeline will utilize coated pipe, cathodically protected by either galvanic (magnesium) anodes distributed along the system or an impressed current rectifier system. For a galvanic anode system, anode beds will consist of thirty-two pound magnesium anode(s) and will be located at distribution points along the Proposed Natural Gas Pipeline where soil resistance is lowest. The anodes will be installed in the pipeline trench in accordance with the requirements for corrosion control contained in 16 NYCRR §§ 255.451 *et seq.* If an impressed current rectifier system is chosen (applicable in high resistivity environments), fewer anode beds will be required, as this system cathodically protects appreciably longer sections of main. Soil resistivity tests and induced alternating

current ("a.c.") voltage studies will be conducted. The information gathered from these tests and studies will be used to determine the final cathodic protection design.

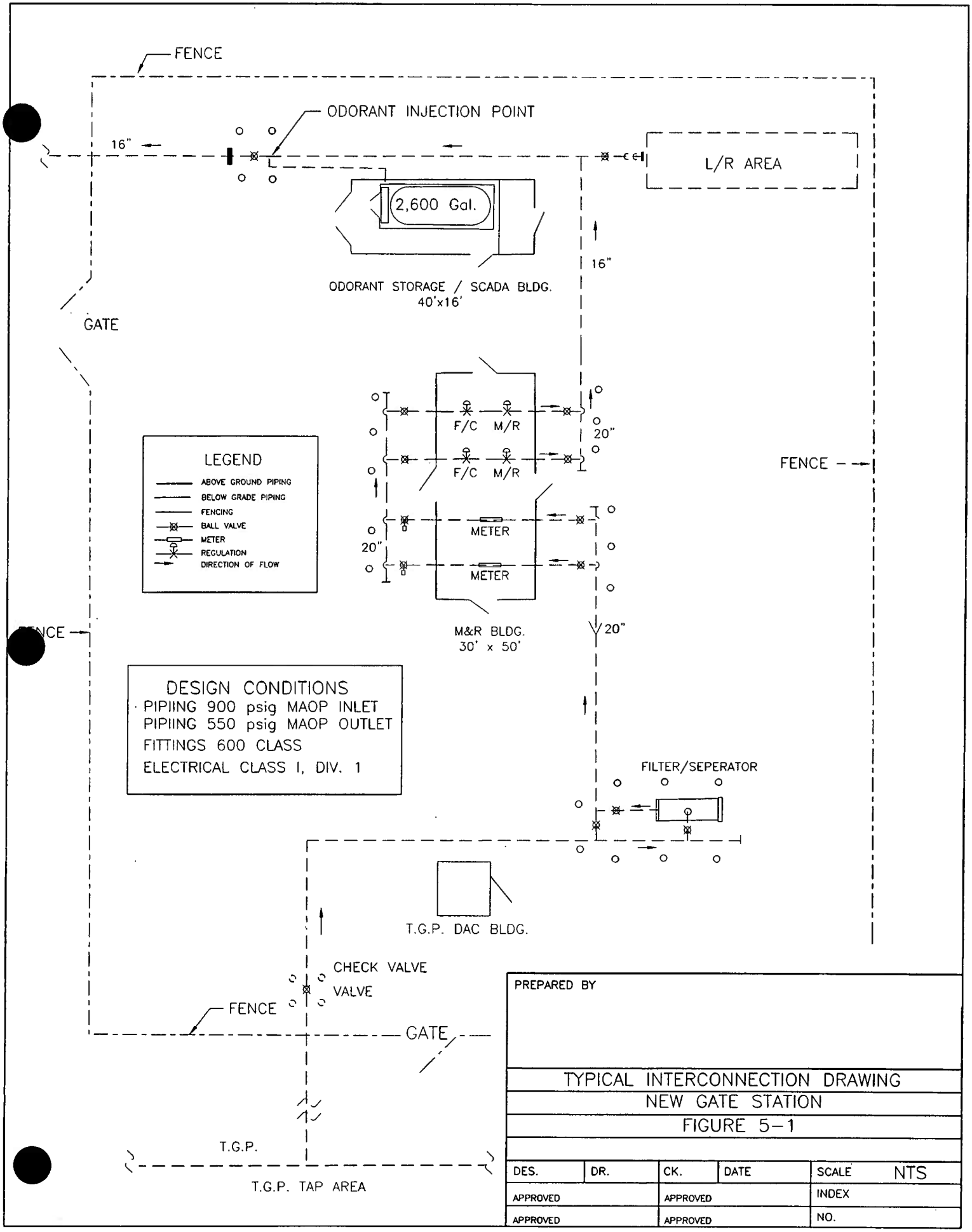
In addition to the anode test stations, supplemental test stations will be located at insulating joints, casings, and at other access points along the Proposed Natural Gas Pipeline. Generally, test stations will be positioned over the Facility and will be located to allow easy access for performing routine tests once the Facility becomes operational.

Potential equalizing grids will be employed at the regulator station and the valve nests to protect personnel from induced ground fault currents. In addition, grounding cells and polarization cells will be employed to protect the Proposed Natural Gas Pipeline from electrical faults or lightning strikes.

FIGURES

Figure 5-1

Typical Interconnection Drawing –New Gate Station



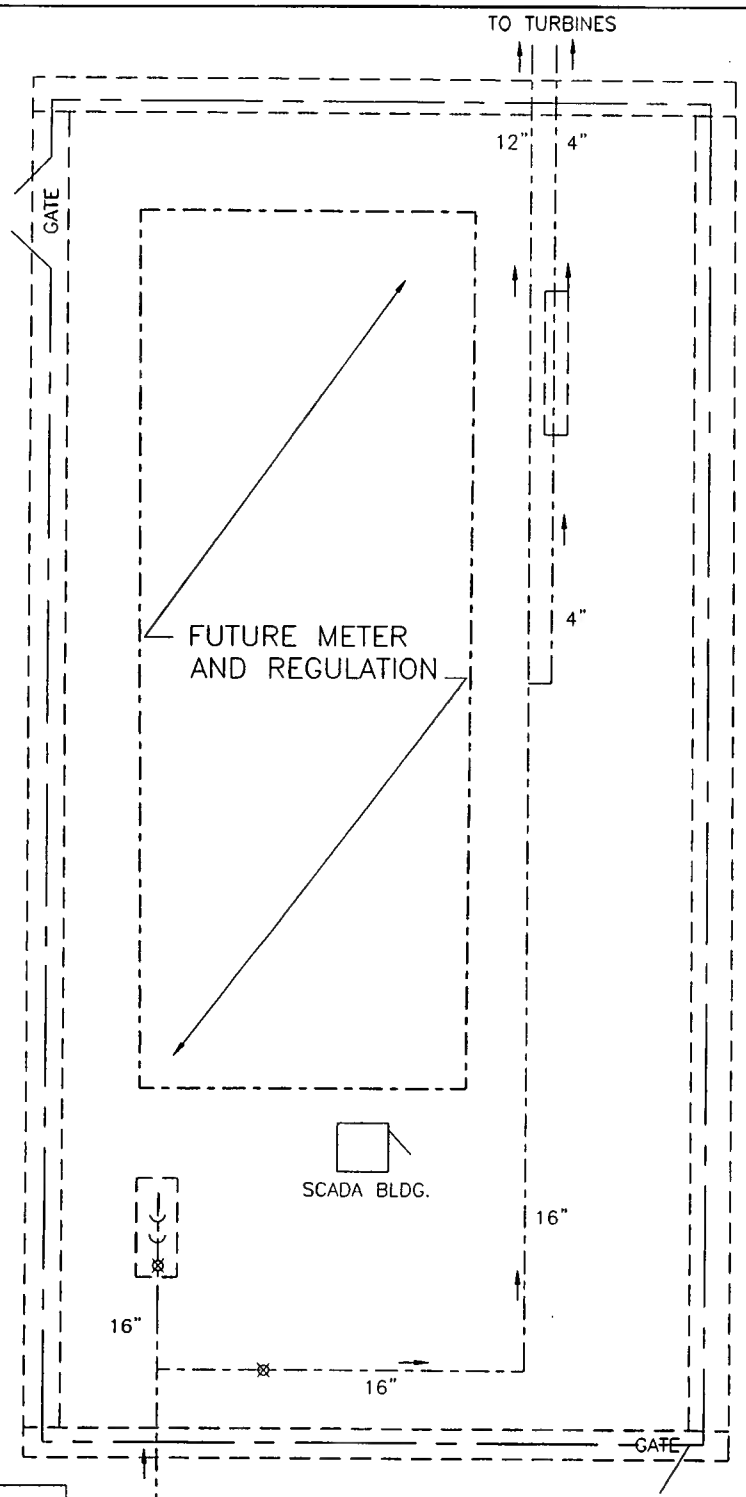
PREPARED BY

TYPICAL INTERCONNECTION DRAWING
NEW GATE STATION
FIGURE 5-1

DES.	DR.	CK.	DATE	SCALE NTS
APPROVED		APPROVED		INDEX
APPROVED		APPROVED		NO.

Figure 5-2

Proposed GLM Design



NOTES:

1.) STATION AREA FENCED 140' x 65' x 7' HIGH WITH LOCAKABLE GATES. APPROX. DRIVE 500' TO RIVERSIDE AVE.

2.) PERSONNEL PROTECTION TO INCLUDE ZINC GROUNDING GRID AND ASSOCIATED TEST STATIONS. GROUNDING GRID SHALL EXTEND 3' BEYOND FENCING AND ALL ABOVE GROUND PIPING.

3.) DESIGN CONDITIONS:

PIPING 900 psig MAOP INLET
PIPING 550 psig MAOP OUTLET
FITTINGS 600 CLASS INLET
FITTINGS 300 CLASS OUTLET
ELECTRICAL CLASS I, DIV. 1

LEGEND

- ABOVE GROUND PIPING
- BELOW GRADE PIPING
- FENCING
- BALL VALVE
- METER
- REGULATION
- DIRECTION OF FLOW

PREPARED BY

PROPOSED GLM DESIGN

FIGURE 5-2

DATE	BY	DESCRIPTION OF REVISION	CK.	APP.

DES.	DR.	CK.	DATE	SCALE NTS
APPROVED		APPROVED		INDEX
APPROVED		APPROVED		NO.

Figure 5-3

Typical Valve Site Design

Figure 5-4

Proposed 16″ Natural Gas Pipeline

Rte 9J & CSX Rail Crossing

Figure 5-5

Proposed 16″ Natural Gas Pipeline

Port Access Highway Crossing

EXHIBIT 6

OTHER PENDING FILINGS

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

TABLE OF CONTENTS 1

APPENDICES 1

EXHIBIT 6 – OTHER PENDING FILINGS 1

6.1 Introduction 1

6.2 Federal Filings / Applications 1

6.3 State Filings / Applications 2

APPENDICES 1

APPENDICES

Appendix 6-A Federal Consistency Assessment Form

Appendix 6-B New York State Department of Environmental Conservation, NOTICE OF INTENT for Stormwater Discharges Associated with Construction Activity

EXHIBIT 6 – OTHER PENDING FILINGS

6.1 Introduction

Sections 85-1.3(a)(1)(i) and 85-1.2(a) of the implementing regulations of the New York State Public Service Law (16 NYCRR Part 85) do not specifically require a discussion of other pending filings for this Application. However, due to the nature of the proposed Besicorp-Empire Power Company, LLC ("PowerCo" or "Applicant") natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility") and its association with another pending Article VII Application for a proposed 345-kilovolt electric transmission line (the "Proposed Transmission Line"), as well as a pending Article X Application / Draft Environmental Impact Report ("Article X Application), filed by Besicorp-Empire Development Company, LLC ("BEDCO"), PowerCo has included this section on known and pending applications or filings that have a potential to impact this Application. The Article X Application seeks approval of a proposed Recycled Newsprint Manufacturing Plant ("RNMP") and cogeneration power Plant ("BEDCO Power Plant"). The Proposed Natural Gas Pipeline will be constructed to provide gas to the BEDCO Power Plant while the Proposed Transmission Line will be constructed to connect the BEDCO Power Plant to the New York State electric grid.

6.2 Federal Filings / Applications

Trenching and fill activities associated with construction of the Proposed Natural Gas Pipeline across miscellaneous streams and wetlands will require a U.S. Army Corps of Engineers ("USACOE") permit or, if determined applicable, permits pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act (33 USCA Section 1344). This permit process is being pursued contemporaneously with the Article VII

process and associated involvement by the New York State Department of Environmental Conservation ("NYSDEC").

PowerCo will make all filings and seek all required consents, approvals, etc. required under all applicable federal laws. PowerCo notes that several federal programs have been delegated to the states. In New York State, these programs are administered by several state agencies and are addressed in the following.

6.3 State Filings / Applications

Since portions of the Proposed Natural Gas Pipeline will be constructed in the coastal zone, the New York State Department of State ("NYSDOS") is required to establish the Facility's consistency with federal, state and local coastal zone policies. A NYSDOS Coastal Management Program, Federal Consistency Assessment Form is included with this Application (see Appendix 6-A). An original copy will be provided under separate cover directly to NYSDOS.

A Clean Water Act 401 Water Quality Certificate, to be issued by the New York State Public Service Commission ("NYSPSC") in conjunction with an Article VII certificate, is necessary in conjunction with the USACOE permit(s) and for discharge of hydrostatic testing waters.

PowerCo believes that the Article VII process, associated NYSPSC-approved Environmental Management and Construction Standards and Practices ("EM&CS&P") plan and construction plans for the Proposed Natural Gas Pipeline fulfill the requirements of a Storm Water Pollution Prevention Plan and associated notification that would otherwise be required for such projects (that disturb over one acre of soils). A completed Notice of Intent form is included with this Application (see Appendix 6-B) and is also being provided under separate cover to the NYSDEC.

The New York State Department of Transportation ("NYSDOT"), pursuant to Section 52 of the New York State Highway Law and implementing regulations set forth at 17 NYCRR § 131.16, requires the procurement of a highway work permit for construction along NYSDOT right-of-ways ("ROWs"), and construction across NYSDOT roadways. PowerCo will be submitting permit requests to the NYSDOT for such uses and activities in connection with the Proposed Natural Gas Pipeline even though this permitting requirement is waived pursuant to Section 130 of the New York State Public Service Law and notwithstanding the fact that the NYSPSC's regulations state that its jurisdiction with respect to siting of fuel gas transmission lines preempts the NYSDOT's authority in connection with that agency's authority over such road-crossings.[1]

The ability to construct the Proposed Natural Gas Pipeline is contingent upon receipt of the approvals listed above, the issuance of a Certificate of Environmental Compatibility and Public Need by the NYSPSC, and the approval by the NYSPSC of the construction drawings that have been submitted with this Application.

In addition, Niagara Mohawk Power Corporation ("NMPC") has filed an Article VII Application for the Proposed Transmission Line that will be required to connect the BEDCO Power Plant to the New York State electric grid. NMPC has also submitted appropriate applications for a 401 Water Quality Certificate and a USACOE permit, which are required for the Proposed Transmission Line.

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1 "The applicant's filing of a road-crossing permit form with the [NYSDOT] does not alter the [NYSPSC's] jurisdiction as the ultimate decision making authority with respect to the siting of fuel gas transmission lines." 16 NYCRR § 85-1.2(c)(2) (footnote 10).

As noted above, the Proposed Natural Gas Pipeline will provide natural gas to the BEDCO Power Plant. BEDCO submitted its Article X Application to the NYSPSC on December 20, 2001. The Article X Application is currently under review (Case No. 00-F-2057).

APPENDICES

Appendix 6-A

Federal Consistency Assessment Form

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM
Federal Consistency Assessment Form

An applicant, seeking a permit, license, waiver, certification or similar type of approval from a federal agency which is subject to the New York State Coastal Management Program (CMP), shall complete this assessment form for any proposed activity that will occur within and/or directly affect the State's Coastal Area. This form is intended to assist an applicant in certifying that the proposed activity is consistent with New York State's CMP as required by U.S. Department of Commerce regulations (15 CFR 930.57). It should be completed at the time when the federal application is prepared. The Department of State will use the completed form and accompanying information in its review of the applicant's certification of consistency.

A. APPLICANT (please print)

1. Name: Besicorp-Empire Power Company, LLC
2. Address: 1151 Flatbush Road, Kingston, NY 12401
3. Telephone: Area Code (845) 336-7700

B. PROPOSED ACTIVITY

1. Brief description of activity: Construction and operation of an approximately 4.5-mile, 16-inch diameter high-pressure natural gas pipeline.
2. Purpose of activity: To supply natural gas to the proposed Besicorp-Empire Development Company, LLC 505-megawatt (nominal) Cogeneration Power Plant to be built in the City of Rensselaer, NY.
3. Location of activity:

Rensselaer	Schodack, East Greenbush & Rensselaer	(linear facility)
County	City, Town, or Village	Street or Site Description

4. Type of federal permit/license required: Section 404 of the Clean Water Act
5. Federal application number, if known:
6. If a state permit/license was issued or is required for the proposed activity, identify the state agency and provide the application or permit number, if known:

   An Article VII Certificate (New York State Public Service Law) from the New York State Public Service Commission is required. The Article VII Application is being prepared for filing in January 2004.

C. COASTAL ASSESSMENT Check either "YES" or "NO" for each of these questions. The numbers following each question refer to the policies described in the CMP document (see footnote on page 2) which may be affected by the proposed activity.

		YES	NO
1.	Will the proposed activity result in any of the following:		
a.	Large physical change to a site within the coastal area which will require the preparation of an environmental impact statement? (11, 22, 25, 32, 37, 38, 41, 43)	__	X
b.	Physical alteration of more than two acres of land along the shoreline, land under water or coastal waters? (2, 11, 12, 20, 28, 35, 44)	__	X
c.	Revitalization/redevelopment of a deteriorated or underutilized waterfront site? (1)	__	X
d.	Reduction of existing or potential public access to or along coastal waters? (19, 20)	__	X
e.	Adverse effect upon the commercial or recreational use of coastal fish resources? (9,10)	__	X
f.	Siting of a facility essential to the exploration, development and production of energy resources in coastal waters or on the Outer Continental Shelf? (29)	__	X
g.	Siting of a facility essential to the generation or transmission of energy? (27)	X	__
h.	Mining, excavation, or dredging activities, or the placement of dredged or fill material in coastal waters? (15, 35)	__	X
i.	Discharge of toxics, hazardous substances or other pollutants into coastal waters? (8, 15, 35)	__	X
j.	Draining of stormwater runoff or sewer overflows into coastal waters? (33)	__	X
k.	Transport, storage, treatment, or disposal of solid wastes or hazardous materials? (36, 39)	__	X
l.	Adverse effect upon land or water uses within the State's small harbors? (4)	__	X
2.	Will the proposed activity affect or be located in, on, or adjacent to any of the following:	YES	NO
a.	State designated freshwater or tidal wetland? (44)	X	__
b.	Federally designated flood and/or state designated erosion hazard area? (11, 12, 17,)	__	X
c.	State designated significant fish and/or wildlife habitat? (7)	X	__
d.	State designated significant scenic resource or area? (24)	__	X
e.	State designated important agricultural lands? (26)	__	X
f.	Beach, dune or barrier island? (12)	__	X
g.	Major ports of Albany, Buffalo, Ogdensburg, Oswego or New York? (3)	X	__
h.	State, county, or local park? (19, 20)	__	X
i.	Historic resource listed on the National or State Register of Historic Places? (23)	__	X
3.	Will the proposed activity require any of the following:	YES	NO
a.	Waterfront site? (2, 21, 22)	__	X
b.	Provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (5)	__	X
c.	Construction or reconstruction of a flood or erosion control structure? (13, 14, 16)	__	X
d.	State water quality permit or certification? (30, 38, 40)	X	__
e.	State air quality permit or certification? (41, 43)	__	X
4.	Will the proposed activity occur within and/or affect an area covered by a State approved local waterfront revitalization program? (see policies in local program document)	X	__

D. ADDITIONAL STEPS

1. If all of the questions in Section C are answered "NO", then the applicant or agency shall complete Section E and submit the documentation required by Section F.

2. If any of the questions in Section C are answered "YES", then the applicant or agent is advised to consult the CMP, or where appropriate, the local waterfront revitalization program document*. The proposed activity must be analyzed in more detail with respect to the applicable state or local coastal policies. On a separate page(s), the applicant or agent shall: (a) identify, by their policy numbers, which coastal policies are affected by the activity, (b) briefly assess the effects of the activity upon the policy; and, (c) state how the activity is consistent with each policy. Following the completion of this written assessment, the applicant or agency shall complete Section E and submit the documentation required by Section F.

   Please refer to Table 4.5-5 located on pages 4-42 through 4-49 of Exhibit 4.

E. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with the State's CMP or the approved local waterfront revitalization program, as appropriate. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program, or with the applicable approved local waterfront revitalization program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Besicorp-Empire Power Company, LLC

Address: 1151 Flatbush Road, Kingston, New York 12401

Telephone: Area Code (845) 336-7700

Applicant/Agent's Signature: R. Clark Date: 1/12/04

F. SUBMISSION REQUIREMENTS

1. The applicant or agent shall submit the following documents to the New York State Department of State, Division of Coastal Resources, 41 State Street - 8th Floor, Albany, New York 12231.

   a. Copy of original signed form.
   b. Copy of the completed federal agency application.
   c. Other available information, which would support the certification of consistency.

2. The applicant or agent shall also submit a copy of this completed form along with his/her application to the federal agency.

3. If there are any questions regarding the submission of this form, contact the Department of State at (518) 474-6000.

*These state and local documents are available for inspection at the offices of many federal agencies, Department of environmental Conservation and Department of State regional offices, and the appropriate regional and county planning agencies. Local program documents are also available for inspection at the offices of the appropriate local government.

Appendix 6-B

New York State Department of Environmental Conservation

NOTICE OF INTENT

for Stormwater Discharges Associated

with Construction Activity

Notice of Intent ("NOI")

New York State Department of Environmental Conservation

Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NOTICE OF INTENT for Stormwater Discharges Associated with Construction Activity UNDER SPDES GENERAL PERMIT #GP-02-01

NYR _ _ _ _ _ _ _
(for DEC use only)

IMPORTANT: **All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this general permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to completing and submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.**

Section I. Applicant/Activity Information

1. Owner/Operator Name: Besicorp-Empire Power Company, LLC

2a. Mailing Address: 1151 Flatbush Road	2b. City Kingston	2c. State NY	2d. Zip 12401
3. Contact Person: 3a. First Name: Douglas 3b. Last Name: Constant	3c. Phone: (845) 336-7700 x 160	3d. E-mail: dconstant@besicorp.com	
4a. Site/Project Name: Proposed Natural Gas Pipeline; 4.5 miles		4b. Existing use of the site: Highway ROW	
5a. Street Address: NYS Rt. 9J (pipeline occupies highway ROW 3.9 mi.)	5b. City: Towns of Schodack & E. Greenbush; City of Rensselaer	State: NY	5c. Zip
6. County: Rensselaer	7. Site Location: 7a. X Coordinates:_____	7b. Y coordinates:_____	

Section II. Disturbance Activity/Discharge Characteristics

8. Future use of the site: pipeline and highway ROW	9. Duration of disturbance activity (use mm/dd/yyyy) from: 2005 to: 2005
10. Total site acreage: Approx. 25 (acres)	11. Total acres of disturbed area of overall plan of development or sale: —
12. Soil (Hydrologic Soil Group) mostly Hudson	13. What is the maximum slope of disturbed area: 5 -10% (in Highway ROW)

14. What is the percentage of impervious area of the site? 14a. before commencement of the project % Same
See NYSDPS Article VII Application 14b. after completion of the project: %

15. Will there be permanent stormwater management practices? ☐ yes ☑ no
16. Is this a phased project? ☐ yes ☑ no

Section III. Receiving System(s)

17. Does any part of the project lie within a regulated 100-year flood plain? ☑ yes ☐ no
18. Does the site/activity lie within the boundaries of the New York City watershed? ☐ yes ☑ no
19. Does runoff from site enter a storm sewer or ditch maintained by a local, Federal or State governmental unit (MS4)? ☑ yes ☐ no
If the answer to 19 is no, skip to question 20:
19a. Provide the name of the government owning the storm sewer system: Towns of Schodack & E. Greenbush, City of Rensselaer
19b. Is the MS4 a "regulated MS4" as defined under 40 CFR Section 122.32? ☐ yes ☐ no ☑ don't know
19c. Does the MS4 have a SPDES permit for their storm sewer system? ☐ yes ☐ no ☑ don't know
19d. Is the runoff from the site tributary to a Combined Sewer Overflow (CSO)? ☐ yes ☑ no
20. What is the name of the nearest surface water body into which the runoff will enter? Papscanee Creek & Tributaries
21. Does the runoff discharge to a receiving water identified as 303(d) listed segment ☐, or "TMDL" water ☑, or neither ☐?

Section IV. Stormwater Pollution Prevention Plan:

22. What components are required for the SWPPP? (Consult the SWPPP and Stormwater Permit Process flow chart and check all that apply): 22a. ☑ Erosion and Sediment Control Plan * 22b. ☑ Water Quality and Quantity Controls

* This pipeline project is subject to Article VII of the Public Service Law and a pending Certificate of Environmental Compatibility and Public Need (PSC-Approved Environmental Management Standards & Practices for Construction of Natural Gas Transmission Facilities apply).

23. Is the Construction Sequence Schedule for the planned management practices prepared? Per Article VII ☑ yes ☐ no

Will the Stormwater Pollution Prevention Plan be in conformance with:
24a. local government requirements? ☑ yes ☐ no 24b. NYSDEC requirements? ☑ yes ☐ no
If the answer to 24b. is yes, skip to Section VI.

Section V. Supplemental Information (only if you answered "no" to question 24.b.)

25. **Before submitting this NOI, you must have your SWPPP certified by a licensed Professional.**
This certification must state that the SWPPP has been developed in a manner which will enssure compliance with water quality standards and with the substantive intent of this permit (see general permit for additional information).
Is your plan certified by a licensed Professional? ☐ yes ☐ no

- Do not submit your SWPPP to DEC unless requested.
- A copy of your SWPPP must be submitted to the local jurisdiction(s) as required under Part III, subsection B.2 (also see question #29 below).
- State each deviation from the Department's Technical Standards, reasons supporting each deviation request and an analysis of the water quality impacts in your SWPPP.
- Use Section VII below to summarize the justification statement in one paragraph.
- Allow sixty (60) days from the receipt of your completed application for permit coverage to provide DEC an opportunity to review the application and supporting information.

Section VI. Reviews and Approvals

Has your SWPPP been reviewed by: 26a. ☑ local Soil and Water Conservation District 26b. ☐ Professional Engineer
26c. ☐ Certified Professional Erosion Control Specialist 26d. ☐ Licensed Landscape Architect. 26e. ☐ None via Article VII process

27. Are there other DEC permits required or already obtained for this project? ☐ yes ☑ no
28. If the answer to 27 is no, skip to question 29.
28a. If this NOI is submitted for the purpose of continuing previous coverage under the general permit for stormwater runoff from construction activities (GP-93-06), please indicate the SPDES reference number assigned under GP-93-06: NYR1_____
28b. If there is another SPDES permit, please indicate the permit number: NY _____
28c. If there are other DEC permits, please provide one of the permit numbers: _____

29. Has a copy of your SWPPP been submitted to the governing jurisdiction as required by the permit? ☑ yes ☐ no

Section VII. Details (use this space, maximum of 650 characters, to further explain answers where necessary).

An Article VII application is being filed with the NYS Public Service Commission for this proposed pipeline project. PSC-approved Standards and Practices for the Environmental Management and Construction of Natural Gas Transmission Facilities include erosion control and water quality/quantity-related measures that conform to a SWPPP. The local governments, Soil and Water Conservation District and NYSDEC are Article VII participants.

Section VIII. Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that this document and the corresponding documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction. and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

30a. Printed Name: Douglas Constant	30b. Title/Position: Project Manager	30c. Phone: (845) 336-7700
Signature: Douglas Constant	30d. E-mail: dconstant@besicorp.com	30e. Date:

Reset All Fields

Exhibit 7

EXHIBIT 7

LIST OF APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

EXHIBIT 7– LIST OF APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS **7-1**

7.1 Introduction 7-1

7.2 Compliance with Local Laws, Rules and Regulations 7-3

7.2.1 Town of Schodack 7-3

7.2.2 East Greenbush 7-7

7.2.3 City of Rensselaer 7-12

7.3 Other Zoning and Land Use Planning 7-17

7.3.1 Rensselaer County Master Plan 7-17

7.3.2 Waterfront Land Use 7-17

7.4 List of References 18

List of Figures

Figure 7-1: Zoning along the Proposed Natural Gas Pipeline Route.

EXHIBIT 7– LIST OF APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS

7.1 Introduction

The proposed Besicorp-Empire Power Company LLC ("PowerCo" or "Applicant") natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility") will originate in the Town of Schodack and follow an existing state highway right-of-way ("ROW") into and through the Town of East Greenbush, and exit the highway ROW onto a new private easement terminating at the Empire State Newsprint Projects ("ESNP") site in the City of Rensselaer. All three municipalities are located in Rensselaer County, New York. The ESNP is being developed by Besicorp-Empire Development Company, LLC ("BEDCO") and includes a Recycled Newsprint Manufacturing Plant ("RNMP") and a cogeneration power plant ("BEDCO Power Plant"). The Proposed Natural Gas Pipeline will provide natural gas to the BEDCO Power Plant.

This exhibit addresses the requirements of 16 NYCRR §§ 85-1.2(c)(2) and 85-1.3(a)(1)(ii). Under Section 130 of the Public Service Law, no state agency, municipality or any agency thereof may require any approval, permit, or consent for the construction or operation of a major utility transmission facility[1] subject to Article VII approval[2]. Consequently, PowerCo

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1 The Proposed Natural Gas Pipeline is a "major utility transmission facility" as that term is defined in Section 120 of the Public Service Law.

2 No municipality may require any approval, permit or consent for the construction or operation of a major gas pipeline transmission facility subject to New York Sate Public Service Commission ("NYSPSC") Article VII approval unless said municipality did not receive a notice of the filing of such Article VII application (N.Y. Public Service Law §130 (McKinney 2000)). That is not the case here. All municipalities where the Proposed Natural Gas Pipeline will traverse have been served at least one copy of the entire Application prior to, or simultaneous with, filing the same with the NYSPSC. See the Application "Affidavit of Service." "Municipality" is defined in the NYSPSC regulations as a "county, city, town or village" (16 NYCRR §85-1.0 (e)).

will not be applying for local approvals or permits (e.g., site plan approvals, special permits, variances) in connection with the Proposed Natural Gas Pipeline.[3]

Nevertheless, pursuant to Section 126(1)(f) of the Public Service Law, the NYSPSC must find and determine that the location of the Proposed Natural Gas Pipeline "conforms to applicable state and local laws and regulations issued thereunder." The NYSPSC is authorized to refuse to apply any local ordinance, law, resolution, regulation or any local standard or requirement if the NYSPSC finds that "as applied to the proposed [major utility transmission] facility such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of the consumers whether located inside or outside of such municipality."

To make the required findings and determinations, 16 NYCRR §§ 85-1.2(c)(2) and 85-1.3(a)(1)(ii) require the Applicant to submit a list of applicable State and local laws and regulations issued thereunder, specify any which the Applicant deems unreasonably restrictive, and submit a statement justifying a request for a waiver from compliance of such local ordinance. The following provides this information, requests waivers where necessary and provides justification for each request for waiver.

Finally, under Public Service Law Section 130, PowerCo would also not be required to obtain any town, village or county permits that would otherwise be required (e.g., brush burning, water well drilling and road openings / crossings) for the Proposed Natural Gas Pipeline.

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3 Although Article VII approval would allow PowerCo to conduct state highway work without New York State Department of Transportation ("NYSDOT") highway permits, PowerCo will acquire said permits.

A map of the Proposed Natural Gas Pipeline route depicting the zoning crossed by the route is presented in Figure 7-1.

The County of Rensselaer ("County") does not have any specific review process separate from the municipal subdivisions. The County assists in planning and development initiatives. There are no villages crossed by the Proposed Natural Gas Pipeline route. Therefore, no county or village requirements are included below.

7.2 Compliance with Local Laws, Rules and Regulations

The following list identifies the local laws, rules and regulations that are applicable to construction and operation of the Proposed Natural Gas Pipeline.

7.2.1 Town of Schodack

The Proposed Natural Gas Pipeline will be located in a Residential Agriculture ("RA") zoning district for approximately 1.2 miles from a tap point on Tennessee Gas Pipeline Company's ("TGP") 24-inch high-pressure transmission pipeline No. 200 near its crossing of Route 9J in the Town of Schodack to the East Greenbush municipal boundary. A new gate station will be constructed on a parcel of land abutting Route 9J in the Town of Schodack just north of the TGP ROW that contains TGP's No. 200 transmission line. The proposed route for the Proposed Natural Gas Pipeline will be located on the eastern edge of the Route 9J ROW, through the Town of Schodack.

Chapter 219 – Zoning Law of the Town of Schodack, New York

Article IV – Use, Area and Bulk Regulations

§ 219-13. Schedule of Use Regulations.

A Special Use Permit is required for the construction and operation of public utilities in an RA district. Special permit uses are governed by Article X of Section 219 (§§ 219-70 through 219-77) and will be addressed below.

Article V – Supplementary Regulations

§ 219-32. Development near streams and wetlands.

This section requires a special use permit for all development within 100 feet of the normal streambank of four listed streams in the Town (*i.e.*, the *Moordener Kill*, the *Vlockie Kill*, the *Muitzes Kill* and the *Valatie Kill*) or within 100 feet of the boundary of a mapped New York State Department of Environmental Conservation ("NYSDEC") wetland. The Proposed Natural Gas Pipeline will cross two streams in the Town but none of the four streams listed above. In addition, although NYSDEC-mapped wetlands exist on the west side of Route 9J, the proposed route will be on the east side of the roadway and beyond the 100-foot boundary. Therefore, PowerCo will not be subject to this section.

§ 219-33. Flood-Fringe Overlay District.

All development within the Flood-Fringe Overlay District, as mapped by the Federal Emergency Management Agency, is subject to special use permit review procedures including the special design requirements contained in Section 219-73. The Route 9J ROW within which the Proposed Natural Gas Pipeline will be located, including that portion of

the Route 9J ROW on which the new gate station is to be constructed, falls within this overlay district. Special use permit review, including the requirements contained in Section 219-73, will be addressed below.

Article X – Special Permit Uses

The Applicant asserts that any requirement to obtain a special use permit is supplanted by Section 130 of the Public Service Law including the requirements for site plan review and a public hearing before the Planning Board. Nevertheless, the Applicant notes that the Proposed Natural Gas Pipeline will be in compliance with the standards (as described below), which are required to be met for the Planning Board to issue a special permit.

§ 219-71. General Standards.

The proposed Facility will be consistent with the applicable general standards governing special use permits contained in § 219-71. More specifically, the Proposed Natural Gas Pipeline will be in harmony with the orderly development of the affected (RA) zoning district; will not discourage appropriate development on adjacent land nor impair its value; traffic access to the new gate station will be in compliance with all safety considerations; off-street parking is not relevant to the proposed use; the use will be in general harmony with the surrounding neighborhood; and the Proposed Natural Gas Pipeline will be readily accessible to fire and police.

§ 219-72. Specific Standards.

PowerCo notes that § 219-72 contains no additional specific standards that apply to public utilities.

§ 219-73. Standards within Flood-Fringe Overlay District.

PowerCo asserts that the Proposed Natural Gas Pipeline and gate station structures will fully comply with the standards required for development within the Flood-Fringe Overlay District as set forth in § 219-73. The majority of the Facility that will be located within the Flood-Fringe Overlay District will be buried pipe that will not be affected by flooding. The new Gate Station will be located within the District but will consist of structures that will not be impacted by flooding, e.g., valves, pipe, fencing, etc.

Local Law No. 2 of 1994 – Chapter 222 – Water Quality Control – Commercial Activities

In 1994, the Town of Schodack enacted Local Law No. 2, Chapter 222 to protect water quality by creating a Water Quality Control District which overlays all zoning districts within the Town. This law generally prohibits any commercial or industrial use from discharging into the waters of the Town that "shall cause or contribute to a condition in contravention of the standards adopted by the Town of Schodack, the NYSDEC , NYSDOT, New York State Department of Health and the County Department of Health."

The Proposed Natural Gas Pipeline will be constructed and operated in compliance with all such water quality protections.

Town Code, Section 118 – Flood Damage Prevention

The Proposed Natural Gas Pipeline will be located along the east side of Route 9J in the Town of Schodack and within the 100-year Flood Hazard Zone. Pursuant to Section 118-11 of the Town Code a development permit is required prior to the commencement of any development, including excavations, within such a zone. The Applicant asserts that any requirement to obtain a development permit is supplanted by Section 130 of the Public

Service Law. Nevertheless, the Applicant notes that the Proposed Natural Gas Pipeline will be designed to withstand damage from flooding. In addition, final ground contours will be returned to pre-construction elevations so as not to alter natural floodplains, stream channels and natural stream protective barriers, which are involved in the accommodation of floodwaters.

Town Code, Section 185 – Permit to Excavate within Public Rights-of-Way

Pursuant to Local Law No. 1 of 1992, codified in the Town Code, Section 185, the Town of Schodack requires a permit from the Town Board prior to making "any opening or excavation in or tunnel under any street, highway or public place." This would include street openings and curb cuts. The Proposed Natural Gas Pipeline will be constructed within a State highway ROW in the Town of Schodack and will not cross any town roads, and therefore, no Permit to Excavate from the Town will be required.

7.2.2 East Greenbush

The Proposed Natural Gas Pipeline proceeds through the Town of East Greenbush initially along the edge of the east side of the Route 9J ROW, then crossing under Route 9J, the CSX railroad and land owned by the Albany Port District Commission and continuing northward across an industrially-zoned property to the municipal boundary with the City of Rensselaer. The ROW is completely located within a Residential Agricultural ("RA") zoning district except for the northern approximately 330 feet which is zoned Coastal Industrial.

Comprehensive Zoning Law

Article IV – Regulations and Standards

Section 4.1 – Schedules of Zoning District Regulations

Subsection 4.11 – Use Schedule / Article VII, Section 8.28 – Public Utilities

Pursuant to Article IV, Section 4.1, Subsection 4.11 of the Comprehensive Zoning Law of the Town of East Greenbush, any use, which is not specifically listed in the District Schedule of Use Regulations, shall be considered a prohibited use. Said District Schedule does not include reference to utility natural gas pipelines. Nevertheless, Article VIII, Miscellaneous Provisions, Section 8.2, Subsection 8.28, Public Utilities, of the Comprehensive Zoning Law states that "[t]his Local Law [referring to the Comprehensive Zoning Law] is not intended to restrict the construction or use of underground or overhead public utility distribution facilities or of other public utility structures operating under the laws of the State of New York ... except that any such structure shall conform in character to the environment in which erected," a position that was verified by the Town Zoning Officer. PowerCo will operate the Proposed Natural Gas Pipeline, a public utility structure, under, and in compliance with, the laws of the State of New York. Further, the proposed Facility will be consistent with the character of the surrounding environment, since it will be primarily constructed in an existing highway ROW in the Town of East Greenbush that, in addition to the roadway, is currently occupied by one other underground utility facility, a fiber optic cable. Further, underground utilities are not inconsistent with industrial development. Accordingly, the Proposed Natural Gas Pipeline complies with this section.

Section 4.2 – Supplementary Use Regulations

Subsection 4.207 – Excavations and Soil Mining

Excavations that adversely affect natural drainage or structural safety of adjoining buildings or lands are prohibited and excavations shall not create objectionable dust or noise or contribute to soil erosion. Because the Proposed Natural Gas Pipeline is a linear project, excavations associated with its construction will be transitory and will not occur in a particular location for an extended period of time. This fact, combined with the fact that the excavation will be performed in compliance with the standards contained in the staff-developed Environmental Management and Construction Standards and Practices ("EM&CS&P") plan to avoid objectionable dust and noise and contributions to soil erosion, will minimize these types of impacts. Therefore, PowerCo will be in compliance with this section.

Subsection 4.213 – Activity Standards for Noisome and Injurious Substances, Conditions, and Operations

This section establishes "activity standards" for eleven substances, conditions and operations in all zoning districts (e.g., vibration, smoke, odors) three of which are applicable to the Proposed Natural Gas Pipeline and present compliance issues.[4]

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[4] PowerCo will be in compliance with the standards associated with smoke (no "emission of visible gray smoke of a shade equal to or greater than number two on the Ringelmann Chart, measured at the point of emission") (4.213(b)); odors ("no offensive odor shall be noticeable at the lot line or beyond")(4.213(c)); glare ("no direct or sky reflected glare shall be visible at the lot line or beyond") (4.213(e)); and liquid or solid wastes ("no discharges permitted that might contaminate ground water supply") (4.213(f)). Further, the standards associated with fly ash (the same standard as dust) (4.213(d)); radioactivity (requires that any emissions comply with Federal standards) (4.213(g)); fire and explosion hazard (prohibits processing or storage of materials in a manner that would create an undue hazard) (4.213(i)); breeding of vermin (prohibits the storage of materials "in a manner that facilitates the breeding of vermin") (4.213(j)); and

Construction activities associated with the excavation, pipeline staging, assembly and placement, back–filling and final grading will create the potential for a) Vibrations, (d) Fly Ash, Dust [as it relates to Dust only, the Facility will produce no Fly Ash], and (h) Noise in excess of the standards contained in subsection 4.213 (*see*, 4.213(a), 4.213(d), and 4.213(h)). More specifically, these standards state that vibrations shall not "be discernible at the lot line or beyond"; no emissions of dust are allowed that can cause damage to property or any excessive soiling; and as measured at lot lines, "no continuous hum, intermittent noise, or noise with any noticeable shrillness of a volume of more than 50 decibel" is allowed.[5]

In some locations, construction of the Proposed Natural Gas Pipeline will occur in close proximity to property lines, meaning that the potential exists that vibrations, dust and noise may exceed the relevant standards at such locations, if only for a short time. The proximity of the construction activity in such locations to property lines means that PowerCo cannot assure compliance with the relevant standards. Accordingly, while PowerCo will minimize these impacts, it considers the vibration, dust and noise standards to be unreasonably restrictive in view of existing technology.[6] Therefore, PowerCo seeks a waiver of this section as it relates to vibrations, dust and noise.

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electrical operations (they "shall not create disturbances to radio and television reception in the vicinity") (4.213(k)) have no applicability to the proposed Facility .

5 As noted in Exhibit 2, the Proposed Natural Gas Pipeline will pass twelve dwellings along the more than 2 miles of highway in the Town of Eats Greenbush, only five of which are within 150 feet of the proposed Facility. It is not expected that any vibration, dust or noise standard will be exceeded at any of these residences.

6 Impacts will be minimized through the use of muffled engines, short duration of construction at any given location, water spraying to control dust where needed and limited (both duration and size of charge) blasting or drilling, if either is needed.

Section 4.10 – Watercourse Management Overlay District

Watercourse Management Overlay Districts have been established under the zoning regulations associated with a horizontal distance of 50 feet from the banks of certain identified streams and rivers in the Town (see, subsection 4.10.2). The Proposed Natural Gas Pipeline will cross three streams in the Town that are so protected. Town Planning Board approval is required for any improvements to be made within these Overlay Districts.

The Applicant asserts that any requirement to obtain Planning Board approval is supplanted by Section 130 of the Public Service Law including the submission requirements of subsection 4.10.4. Nevertheless, the Applicant notes that the Proposed Natural Gas Pipeline will be in compliance with the stated intent of the Watercourse Management Overlay Districts as set forth in subsection 4.10.1, *i.e.*, the Facility will preserve and protect natural and cultural resources in the stream corridor, will have no negative impact on surface water quality, will control non-point source pollution such as erosion and sedimentation during construction and operation and maintenance activities and will be protected from flood hazards as it will be placed underground. In addition, the Applicant maintains that the construction plans that accompany this Application fulfill the submission requirements of subsection 4.10.2. A further discussion of impacts and mitigation to waterbodies can be found in section 4.3.2.6 of this Application. Such mitigation will include, among other things: the timing of waterbody crossings to take advantage of crossing when flows are minimized (such crossings will be completed as a separate construction operation; excavated material will be stockpiled away from stream banks and will be protected by sediment control devices; in-stream sediment control devices will be used; equipment in the area of waterbodies will be limited to only the equipment necessary for the waterbody crossing; equipment crossing techniques will be utilized to protect stream

banks; and dry crossing techniques will be utilized when possible; and dam and pump or flume pipes will be used when dry crossings are not possible.

7.2.3 City of Rensselaer

Within the City of Rensselaer, PowerCo intends to construct an approximately one half-mile portion of the Proposed Natural Gas Pipeline and a Gas Large Meter ("GLM") station at the site of the BEDCO Power Plant. The Proposed Natural Gas Pipeline will travel north in a private easement that parallels the CSX rail line to a point where the Proposed Natural Gas Pipeline will enter the southeast corner of the BEDCO Power Plant site. Once on the BEDCO Power Plant site, the proposed Facility will follow an abandoned railroad spur, cross the Port Access Highway near its intersection with Riverside Avenue and continue along the electric ROW on the BEDCO Power Plant site.

Code of the City of Rensselaer[7]

Chapter 105, Flood Damage Prevention

This Chapter establishes certain uses and standards for construction in areas subject to flooding. PowerCo will be in compliance with the applicable standards for construction set forth in this Chapter.

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7 Chapter 179 of the Code of the City of Rensselaer ("CCR") sets forth requirements pertaining to zoning. In addition, Local Law # 1 (January 1979) entitled "City of Rensselaer Zoning Ordinance" also includes requirements pertaining to zoning. The requirements of Chapter 179 of the CCR and Local Law # 1 with relevance to the Proposed Natural Gas Pipeline have no substantive differences, and this Exhibit 7 refers to the CCR in the textual discussion. However, for informational purposes, citations to the sections of Local Law # 1, which correspond to sections of the CCR, are provided in parentheses.

Chapter 131, Noise

Noise associated with construction activities is restricted to between the hours of 6:00 a.m. and 9:00 p.m., except under emergency conditions. PowerCo will be in compliance with this requirement.

Chapter 147, Streets and Sidewalks

Article II, Openings and Excavations

§ 147-2. – Permit Required.

A permit is required from the Commissioner of Public Works prior to the opening or removal of any pavement or sidewalk. As noted above, Pursuant to Section 130 of the Public Service Law, PowerCo is not required to obtain local permits as required by this section.

Chapter 179 – Zoning

Article I, General Provisions

§ 179-3 – Purpose
(Local Law # 1 – Article I, Section C.3.)

Paragraph D of Section 179-3 states that one of the purposes of the Zoning Law is "[t]o prohibit uses, buildings and structures which are incompatible with the character of development or the permitted uses within specified zoning districts." The entire Proposed Natural Gas Pipeline route (within the City) is located within the Heavy Industrial ("I") zoning district as shown on Figure 7-1. The "I" zoning district allows commercial and industrial uses including utility substations. The Zoning Law, however, does not

specifically identify utility natural gas pipelines or gas meter stations as either a permitted or prohibited use. Nevertheless, PowerCo notes that a natural gas distribution pipeline is located along State Route 9J in the City of Rensselaer and a natural gas pipeline and gas meter station is also located within the "I" zoning district associated with an existing cogeneration facility on Riverside Avenue. Therefore, PowerCo maintains that the Proposed Natural Gas Pipeline and the GLM station associated with it, to be constructed on the BEDCO Power Plant site, is compatible with both the character of development and the permitted uses in the "I" zoning district. Accordingly, PowerCo will be in compliance with this section.

Article III, Establishment of Districts

§ 179-13 – Applicability of regulations
(Local Law # 1 – Article III, Section B)

No building or structure can be erected except in conformance with the regulations specified for the district in which it is to be located. PowerCo will be in compliance with all district regulations in the "I" zoning district.

§ 179-21. – General performance standards.
(Local Law # 1 – Article IV, Section A)

Pursuant to Section 179-21, Subsection F, no activities are permitted that involve inflammable and explosive materials unless adequate safety devices are provided to protect against the hazard of fire and explosion and with adequate fire-fighting and fire-suppression equipment and devices standard in the industry. The Proposed Natural Gas Pipeline will be constructed and operated in compliance with all State and Federal standards applicable to natural gas transmission pipelines and will therefore comply with this requirement.

§ 179-27 – Development within Flood-Fringe Overlay District.
(Local Law # 1 – Article IV, Section G)

All development within the Flood Fringe ("FF") Overlay District is subject to special use permit review under Article VI of the Zoning Law. The Proposed Natural Gas Pipeline will be consistent with all requirements necessary for the granting of a special use permit. Accordingly, the Applicant will be in compliance with the substantive provisions related to this section.

§ 179-33 – Required screening
(Local Law # 1 – Article IV, Section M)

All commercial or industrial uses shall be provided with a fence, screen and / or landscaping sufficient to obscure the use from public rights-of-way. The Proposed Natural Gas Pipeline will be located completely underground in the City of Rensselaer and the ROW will be vegetated by natural species. The GLM will be a part of a larger industrial development and not discernable from any public ROWs. Accordingly, PowerCo will be in compliance with the requirements of this section.

Article VI, Special Use Permits.

§ 179-34. – General provisions.
(Local Law # 1 – Article V, Section A)

As stated above, the Proposed Natural Gas Pipeline is neither a permitted nor prohibited use in the "I" zoning district, although an existing natural gas distribution pipeline is located within a portion of the alignment corridor of the proposed Facility and an existing natural gas transmission line and meter station are located within the district. It is assumed, therefore, that the Proposed Natural Gas Pipeline would require the grant of a Special Use

Permit. For a Special Use Permit to be granted, conformance with all applicable regulations governing the zoning district where the use is to be located (§ 179-34.B.(6)) is required. As noted above, the proposed Natural Gas Pipeline will be consistent with all requirements necessary for the granting of a special use permit. Accordingly, the Applicant will be in compliance with this section.

§ 179-36. – Additional requirements for certain special permit uses. (Local Law # 1 – Article V, Section C)

The Proposed Natural Gas Pipeline will be consistent with the requirements of paragraph C of this section relative to structures or uses in the FF overlay district. The proposed Facility will be constructed underground and will not be subject to flotation, collapse or lateral movement due to flood waters; construction materials will be resistant to flood damage; construction practices will minimize potential flood damage, and the use will have no impact to the water level of the one-hundred-year flood. The Proposed Natural Gas Pipeline will be in compliance with these requirements.

However, with regard to the requirements contained in paragraph D of section 179-36 relative to excavation and filling of lands, PowerCo requests a waiver. More specifically, paragraph D.(1)(f) permits excavations but requires a buffered area of not less than 150 feet to be established between the operation and the nearest property line. In addition, paragraph D.(2)(c) permits the filling of land with excavated material provided a 75-foot buffered area be established between the operation and the nearest property line. The nature of the construction necessary for the Proposed Natural Gas Pipeline requires the excavation of a trench, placing the pipeline within the excavated area and backfilling the excavation to cover the pipeline. The Proposed Natural Gas Pipeline ROW will cross one or more property lines and cannot establish the minimum buffers as required by this

section. PowerCo, therefore, requests a waiver of this section because as applied to the proposed facility it is unreasonably restrictive in view of existing technology.

7.3 Other Zoning and Land Use Planning

7.3.1 Rensselaer County Master Plan

The County Master Plan provides broad policies to guide local land use planning. The Master Plan states that local governments should be responsible for managing growth and regulating land use in each community. The County government does not have any formal approvals required for the Proposed Natural Gas Pipeline.

7.3.2 Waterfront Land Use

Two planning initiatives are designed to maximize land use along the Hudson River waterfront. Neither of these initiatives will require any local approvals.

- The Albany Port District Commission Port 2000 - On the Rensselaer side of the Hudson River, the Albany Port District extends as far south as the turning basin and east to the railroad tracks. This encompasses the proposed BEDCO Power Plant site and the industrial properties that the Facility will cross to get there. The Proposed Natural Gas Pipeline in this area will be constructed on the BEDCO Power Plant site, which is on the west side of the railroad tracks, and will therefore be within the port area. The GLM station and the Proposed Natural Gas Pipeline support the development of the BEDCO Power Plant. Accordingly, the Proposed Natural Gas Pipeline and GLM station are consistent with the Albany Port District Commission Port 2000 initiatives.

- Rensselaer Local Waterfront Revitalization Program - This initiative is designed to encourage development that is compatible with the Coastal Zone Management

Program. Consistency with the Coastal Zone Management Program is discussed in Exhibit 4, Section 4.5.6.

7.4 List of References

Albany Port District Commission Port 2000 Expanding the Reach of the Port of Albany/Rensselaer

Code of the City of Rensselaer, New York, v21.

City of Rensselaer Zoning Ordinance Local Law # 1, January 1979.

City of Rensselaer Local Waterfront Revitalization Program, June 1987.

The Comprehensive Zoning Law of the Town of East Greenbush NY Adopted June 4 1986; Revised December 9, 1994, Revised May 10, 1995, and Revised August 11, 1999.

Zoning Law of the Town of Schodack, New York, Chapter 219, adopted October 23, 1986.

Local Law No. 2 of 1994 of the Town of Schodack, Chapter 222, Water Quality Control – Commercial Activities.

FIGURE

Exhibit 8

EXHIBIT 8

ADDITIONAL INFORMATION RELEVANT TO THIS APPLICATION

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

TABLE OF CONTENTS

EXHIBIT 8– ADDITIONAL INFORMATION **8-1**

8.1 Introduction 8-1

8.2 Public Outreach and Information Efforts 8-1

8.3 Responsive Information Received from the Public 8-2

EXHIBIT 8– ADDITIONAL INFORMATION

8.1 Introduction

The following information is provided in accordance with Sections 85-1.3(a)(1)(i) and 85-1.2(a)(2)(i, iv, viii & xi) of the implementing regulations of the New York State Public Service Law (16 NYCRR Part 85), and addresses the specific requirements of Section 85-1.3(a)(4), "other information the applicant considers relevant."

8.2 Public Outreach and Information Efforts

Besicorp-Empire Development Company, LLC ("BEDCO") conducted a public outreach effort associated with the proposed 4.5-mile natural gas pipeline ("Proposed Natural Gas Pipeline" or "Facility") needed to provide natural gas to BEDCO's proposed cogeneration facility ("BEDCO Power Plant") in the City of Rensselaer. A Public Open House was held on December 19, 2002 at the City Hall in the City of Rensselaer. All residents along the original route of the Proposed Natural Gas Pipeline were invited to attend this session. Portions of this Application have been revised based on information or requests from the general public, which were received at that Open House.

As an important part of the evaluation process, PowerCo has sought input from the New York State Public Service Commission ("NYSPSC") staff, New York State Department of Transportation ("NYSDOT") representatives, Tennessee Gas Pipeline ("TGP") representatives, Niagara Mohawk Power Corporation ("NMPC"), the City of Rensselaer, the Town of East Greenbush, the Town of Schodack, area residents and other parties to the ongoing Article X proceeding associated with the BEDCO Power Plant. To date, a series of nine meetings with local officials, regulators and area residents have been conducted (BEDCO met on 11/21/02 with East Greenbush; 11/26/02 with NYSPSC; 11/27/02 with East

Greenbush; 1/15/03 with East Greenbush; and 1/15/03 with NYSPSC staff – NMPC met on 1/8/03 with East Greenbush, 2/5/03 with NYSDPS and NYSDEC staff, 3/4/03 with Rensselaer and 3/5/03 with Schodack.).

As part of the process of delineating wetlands along the original Proposed Natural Gas Pipeline route as described in the Article X Application / Draft Environmental Impact Report for BEDCO's Empire State Newsprint Projects ("ESNP"), the Applicant's consultant identified areas that might be used for temporary work-space or additional permanent easement. In order to delineate and survey these areas, landowners were identified and letters sent in mid-November, 2002, requesting property access. Exhibit ___(RPR-1) contains a sample copy of the letter that was sent.

8.3 Responsive Information Received from the Public

In response to the wetland delineation letters that were sent by PowerCo's consultant, four telephone calls were received seeking additional information about the process. Responses were received from approximately one-quarter of the letter recipients, with only one denying property access.

Exhibit 9

EXHIBIT 9

APPLICATION CROSS REFERENCE

BESICORP-EMPIRE POWER COMPANY, LLC
PPROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

APPLICATION REQUIREMENTS PER PUBLIC SERVICE LAW §§ 121-A(3) AND 122; 16 NYCRR § 85.1-3	
Requirements of 16 NYCRR § 85.1-3	**Location in Application**
§ 85-1.3 Content, filing and service of application.	
(a) An application to construct a fuel gas transmission line which is less than 10 miles long, other than as described in section 85-1.2(a) of this Subpart, or section 120(2) of the Public Service Law, shall contain:	
(1) the information required by:	
(i) section 85-1.2(a) of this Subpart; and	
(ii) section 85-1.2(c)(2) of this Subpart	**See Below**
(2) a description using text and detailed construction-type map (at a scale of 1 inch = 400 feet, or larger) showing the centerline and the specific relationship of the line to such features as:	Final Construction Drawings
(i) sensitive resources which will be affected by the line, as defined in section 85-1.2(a)(3) of this Subpart;	Exhibits 4.5, 4.7, 4.8 and 4.10
(ii) property boundaries, fences, walls and hedgerows to be crossed; and	Final Construction Drawings
(iii) any dwelling within 150 feet;	Final Construction Drawings
(3) a statement explaining the need for the line, including:	
(i) a demonstration that a market[12] (or specific purchaser) for the gas will exist;	Exhibits 3.1 and 3.2
(ii) where the applicant will serve retail customers, a demonstration that gas supplies will be adequate to serve existing and potential customers during the first 10 years of the line's operation; and	Exhibits 3.1 and 3.2
(iii) a showing (if well drilling is not contemplated in conjunction with the line) of the improvements in system reliability, capability, safety or benefits offered by the line; and	Exhibit 3.2
(4) any other information the applicant considers relevant.	Exhibits 3.3, 3.4 and 8
§ 85-1.2 Content, filing and service of notices of intention.	
(a) Any NOI filed by an applicant to construct a fuel gas transmission line less than five miles long and six inches or less in nominal diameter shall contain:	
(1) the dates on or about which the aplicant intends to begin construction of the line;	Spring 2005
(2) a brief statement describing and locating the line (using text and a topographic map at a scale of 1:24,000 – 1 inch = 2,000 feet – or larger with legend), including:	Exhibit 2.3; Figure 2-1
(i) its length (and nominal diameter of its segments), including markers required by paragraph 9 of Appendix 14-K of 16 NYCRR Part 255;[3]	Exhibit 2.3; Figure 2-1; Appendix 5-B
(ii) depth at which pipe will be buried;	Exhibit 4.3
(iii) maximum allowable operating pressure (psig);	Exhibit 4.2

APPLICATION REQUIREMENTS PER PUBLIC SERVICE LAW §§ 121-A(3) AND 122; 16 NYCRR § 85.1-3	
Requirements of 16 NYCRR § 85.1-3	**Location in Application**
(iv) R/W width;	Exhibits 2.4 and 4.5
(v) width of any area to be cleared;	Exhibit 2.4; Figure 2-1
(vi) any known underground facilities to be crossed or paralleled;[3]	Figures 2-4 and 2-5
(vii) name or permit number of any wells to be connected to the line;[3]	NA
(viii) the point where the line connects to another pipeline (giving the nominal diameter of such line and any associated compressor station;[3]	Exhibits 2.3, 5.4, 5.5; Figures 2-1, 2-2, 5-1
(ix) existing or proposed access roads to be used for construction and maintenance of the line and any associated compressor station;[3]	Exhibit 2.4.5; Figure 2-1
(x) for any new or expanded compressor station,[3] a site development plan (at a scale of at least 1 inch = 20 feet), showing: location; setbacks to property lines; structures (giving profile, materials and finish); grading and landscaping; drainage provisions; number, type, size and model of the compressor(s) and silencer(s); and the materials and design of any noise abatement structures; and	NA
(xi) the name of every municipality in which any portion of the line is to be located;[3]	Exhibit 2.3; Figure 2-1
(3) an indication of which measures and techniques from the approved EM&CS&P to which the applicant has agreed (or any site-specific modification thereof) will be followed in an effort to minimize or avoid adverse environmental impact on sensitive resources affected by the line(s) to the maximum extent practical, which resources include:[4]	Exhibit 10 Checklist
(i) existing and officially approved planned residential, commercial, industrial, institutional, recreational and agricultural land uses;[5]	Exhibit 4.5; Figures 4-2 and 7-1
(ii) ecosystem resources, including highly erodable soils,[6] wetlands, flood plains, streams, springs, wells, unique old-growth forests, active sugarbushes, productive timber stands,[7] trees listed in the *Registry of Big Trees in New York State* and habitats of rare, threatened and endangered species (from wetlands on, these resources can be identified in cooperation with the landowner and the Department of Environmental Conservation);	Exhibits 4.5, 4.6, 4.7 and 4.8; Figures 4-1, 4-2, 4-5, 4-6 and 4-7
(iii) officially designated visual resources,[8] including scenic areas, roads, vistas and overlooks; and	Exhibit 4.5.5
(iv) officially designated cultural resources,[8] including archaeological sites and historic districts, places and properties.	Exhibit 4.5.5, 4.10; Appendix (JLK-1)

APPLICATION REQUIREMENTS PER PUBLIC SERVICE LAW §§ 121-A(3) AND 122; 16 NYCRR § 85.1-3	
Requirements of 16 NYCRR § 85.1-3	**Location in Application**
(c) If an applicant wishes to construct and operate a line without obtaining a permit from any other State agency, municipality, or agency thereof, the NOI shall contain, in addition to the information required by subdivision (a) of this section:	
(2) a list of applicable State and local laws and regulations issued thereunder, including copies of any local ordinance, law, resolution or other action, any regulation issued thereunder, or any local standard or requirement that, as applied to the line, the applicant believes to be unreasonably restrictive in view of the existing technology, factors of cost or economics or the need of consumers[.] [10]	Exhibit 7
§ 85-1.4 Determination of line length and system configuration.	
(b) Any NOI or application shall include every line then planned for a proposed system. A system includes all lines tying into a common point leading to market, which is usually a meter site, but may be a regulator station or compressor site. The type of document submitted will be determined by the length of the longest line included.[15]	Figures 2-1 and 5-1

notes:

[3] This item shall be shown on the map, which shall cover the entire project area.

[4] The applicant shall provide the name, title and qualifications of the company representatives directly responsible for seeing that all environmental requirements are fully met.

[5] Concerning agricultural land use, the applicant shall, in cooperation with the landowner(s) and Soil and Water Conservation District, consider both active and inactive fields. *Active* and *inactive fields*, by definition, are cropland, rotation hayland and cropland, hayland, livestock grazing areas, orchards and vineyards. The applicant shall also identify those areas containing practices for agricultural resources management, including strip-cropping, diversion terraces, underground tile drain lines, surface drainage ditches, and waste management conveyance and storage systems.

[6] To aid in the selection of measures and techniques for minimizing adverse environmental impact on the soil's resource, the applicant should contact the county office of the U.S. Department of Agriculture, Soil Conservation Service, to identify the soil type(s) and slope(s) and respective limitations, including the depth of the topsoil, depth from surface to bedrock, and soil drainability.

[7] *Protective timber stands* are viable or potential commercial forest stands composed of saplings (0-5 inches in diameter), poles (6-11 inches in diameter) and/or mature trees (12 inches plus in diameter).

[8] Designated and listed by the State, county, town, city or incorporated village. This includes listings by the State Historic Preservation Officer and the National and State Registers for historic and cultural sites.

[9] Provision of additional copies directly to county and town planners, and county, town, city or village highway superintendents, will expedite the certification process.

[10] To satisfy this requirement, a list of State and local permits will usually be sufficient. This list might include wetland permits, stream-crossing permits, road-crossing permits, or any other State or municipal permit. The applicant's filing of a road-crossing permit form with the Department of Transportation does not alter the commission's jurisdiction as the ultimate decision making authority with respect to the siting of a fuel gas transmission lines.

[12] Where such a demonstration is made in another proceeding, either before this commission or the Federal Energy Regulatory Commission, that demonstartion may be supplied.

[15] The document filed should include a map showing all lines anticipated to be part of a given system, even though not proposed for construction at the time of the current filing.

Exhibit 10

EXHIBIT 10

ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION STANDARDS AND PRACTICES CHECKLIST

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, County of Rensselaer, New York
Town of East Greenbush, County of Rensselaer, New York
City of Rensselaer, County of Rensselaer, New York

ARTICLE VII APPLICATION FOR PROPOSED NATURAL GAS PIPELINE
TOWN OF SCHODACK, TOWN OF EAST GREENBUSH AND CITY OF RENSSELAER
CHECKLIST OF
COMMISSION-APPROVED EM&CS&P ITEMS
TO BE EMPLOYED BY THE APPLICANT

		X indicates item will be employed on this Project*
A.	**Supervision**	x
B.	**Identification and protection of sensitive resources**	x
C.	**Site Preparation**	x
1.	Confining clearing to minimum	x
	a. General guidelines	x
	b. Specific limitations in sensitive areas	x
	c. Tree felling	x
2.	Clearing and slash disposal techniques	x
	a. Salvaging merchantable woody material	
	b. Disposal of non-merchantable wood material (removal along highway ROW)	x
	(1) Logs	x
	(2) Limbs and tops	x
	(3) Stump disposal.	x
	c. Use of material for building temporary roads	x
3.	Rough grading	x
4.	Access roads and construction paths	x
	a. Building access roads or construction paths	x
	(1) Corduroy and/or brush mat roads	x
	(2) Filter fabric and gravel roads	
	(3) Gravel roads	
	b. Standard stream crossing techniques and procedures	x
	(1) Blasting mats	x
	(2) Log culverts	
	(3) Stream ford without sill	x
	(4) Stream ford with sill	x
	(5) Temporary bridging	
	c. Wetland crossing techniques and procedures	x
	(1) Corduroy and/or brush mat roads	x
	(2) Filter fabric and/or corduroy with gravel roads	
	(3) Temporary wooden or pontoon bridges or their equivalents	
5.	Drainage and erosion control	x
	a. Standard water diversion devices and their applicability (Highway agency contact)	x
	(1) Swales and berms	x
	(2) Side ditches	x
	(3) Diversion ditches	x
	(4) French drains	x
	(5) Culverts (maintain highway ROW culverts)	x
	(6) Catchment basins	x

	b. Standard sediment retention techniques and methods for drainage and runoff	x
	(1) Hay bales and filter material	x
	2) Basins and retention ponds	x
B.	**Pipeline installation**	
1.	ROW proper (locate overhead and buried facilities; excavate by hand, as directed)	x
	a. Trenching, erosion controls, safety measures, ornamental vegetation and blasting	x
	b. Pipe-laying	x
	c. Hydrostatic testing	x
	d. Backfilling	x
	e. Stream Installations	x
	f. General restrictions for water-related resources	x
2.	Highway and railroad crossings	x
	a. Highway traffic control	x
	b. Open road cuts	x
	c. Boring	x
	d. Erosion control	x
3.	Associated facility sites	x
	a. Compressor sites and regulator stations (including gate stations)	x
	b. Equipment staging areas and temporary work areas	x
4.	Handling and disposal of fuels, chemicals or similar substances	x
	a. Storage at equipment staging area or marshalling yard	x
	b. Refueling	x
	c. Spill prevention and response procedure	x
5.	Ongoing erosion control during construction (as required by conditions)	x
6.	Noise impact mitigation and dust control measures during construction	x
	a. Routine mitigation measures	x
	b. Blasting restrictions	x
C.	**Restoration of ROW and associated sites**	
1.	ROW cleanup and restoration of man-made structures	x
2.	Removal of temporary erosion control devices	x
3.	Site preparation	
	a. Grading and additional backfill.	x
	b. Discing and raking	x
	c. Liming and fertilizing	x
4.	Seeding and planting	x
	a. Grass seed mixtures and mulch	x
	b. Shrub and tree plantings (ornamental)	x
	c. Timing	x
	d. Follow-up	x
5	Streambank restoration	x
	a. Technique and material	x

	(1) Low velocity - low volume	x
	(2) High velocity - low volume	x
	(3) High or low velocity - high volume	x
	(4) High or erratic velocity - high volume	x
	b. Use of vegetation	x
	c. Follow-up responsibilities	x
6.	Watering of plantings	x
D.	**Long-term ROW maintenance**	x
1.	Maintaining drainage and erosion controls, access roads, fences and gates	x
2.	Provisions for maintaining integrity of sensitive sites affected by construction	x
3.	Vegetation maintenance	x
	a. Objectives	x
	(1) Restricting mowing and treatments to confines of easement or ROW	x
	(2) Unmowed buffers	
	(3) Retention of hedgerows	
	b. ROW vegetation maintenance methods and their application	x
	(1) Mechanical methods	x
	(a) Handcutting	
	(1) Cut it and leave as it lays	x
	(2) Cut and hand pile	x
	(3) Cut and machine pile	x
	(b) Machine cutting	x
	(1) Mowing	x
	(2) Rotary brush cutters	x
	(3) Brush hog	x
	(2) Chemical treatment	x
	(a) Stem-specific	
	(1) Basal	
	(2) Stem injection	
	(b) Selective foliar spray	x
	(1) Backpack sprayer method (Low Volume)	x
	(2) Mounted spray unit method (Hydraulic Low Volume)	x
	(3) Cut and treat	x
	(a) Pre-spray and cut	
	(b) Cut and stump treat	x
3.	Provisions for maintaining access roads, fences and gates	x
4.	Provisions for maintaining the integrity of sensitive sites affected by construction	x
	a. Streams and wetlands	x
	b. Steep slopes and ravines	x
	c. Rare, threatened and endangered habitat	
	d. Scenic areas and vistas	
	e. Special conditions in certificates	x
	f. Post-construction noise evaluation of compressors	
5.	Accommodations for multiple uses of ROW	x
	a. Existing land uses	x
	b. Existing recreational uses	x
6.	Local laws and ordinances	x

Douglas A. Constant

* These standards and practices are the environmental management and construction standards and practices ("EM&CS&P"s) that were approved by the New York State Public Service Commission ("NYSPSC") on March 6, 1985 (Case 70100). The checked standards and practices are those that are reasonably anticipated to be applied to this project. Dependent upon actual field conditions encountered during construction and long-term right-of-way maintenance, some of these checked standards and practices may be substituted by other, NYSPSC-approved standards and practices, as determined in the field by the assigned environmental supervisory and inspection personnel.

Exhibit 11

EXHIBIT 11

ALTERNATIVES ANALYSIS

BESICORP-EMPIRE POWER COMPANY, LLC
PROPOSED NATURAL GAS PIPELINE

Town of Schodack, Rensselaer County, New York
Town of East Greenbush, Rensselaer County, New York
City of Rensselaer, Rensselaer County, New York

TABLE OF CONTENTS

11.0 ALTERNATIVES ANALYSIS **11-1**

11.1 Identification of Alternatives 11-1

11.2 Alternatives Screening 11-3

11.3 Rationale for Selected Alternative 11-4

11.0 ALTERNATIVES ANALYSIS

11.1 Identification of Alternatives

As noted in Exhibit 3, the need for the 4.5-mile, 16-inch diameter, natural gas transmission pipeline ("Proposed Natural Gas Pipeline" or "Facility") is to provide a supply of natural gas to the Besicorp-Empire Development Company, LLC ("BEDCO") cogeneration power plant ("BEDCO Power Plant") being developed in the City of Rensselaer. Although the BEDCO Power Plant will be permitted to burn both natural gas and distillate oil, use of the latter fuel will be restricted to 960 hours per year as a part of the air permit issued for the operation of the BEDCO Power Plant. Therefore, distillate oil can only serve as an alternative fuel. Accordingly, if the BEDCO Power Plant is to be built, which will contribute to an increased supply of clean electricity to the wholesale electric market in addition to the supply of energy to BEDCO's proposed Recycled Newsprint Manufacturing Plant, the no-build scenario is not a viable alternative.

Two interstate pipeline companies service the area surrounding the BEDCO Power Plant site, Tennessee Gas Pipeline Company ("TGP") and Dominion Transmission Inc. ("DTI").

TGP maintains 14,700 miles of pipeline from Mexico to Canada. TGP is a part of the El Paso Pipeline Group, headquartered in Houston, Texas. TGP provides gas from the Gulf Coast, Northwestern Canada and the Canadian Maritime provinces. Recent upgrades to the TGP system at Dracut, Massachusetts allow TGP to transport gas currently provided over the Maritimes and Northeast pipeline from Sable Island to Dracut.

The TGP system includes a transmission pipeline (No. 200) that is located approximately four and one half miles south of the BEDCO Power Plant site. This pipeline runs under the Hudson River and travels in a generally east-west direction. The No. 200 pipeline is