SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

APPLICATION

FOR

ROSWELL 115 KV LINE TAP

Prepared by:

East River Electric Power Cooperative, Inc.
121 Southeast First Street
Madison, South Dakota

And

DeWild Grant Reckert and Associates Company
1302 South Union Street
Rock Rapids, Iowa 51246

September 2, 2008

CONTENTS

LIST OF EXHIBITS

ACRONYMS AND ABBREVIATIONS

69 kV	69,000 Volt
115 kV	115,000 Volt
230 kV	230,000 Volt
ACSR	Aluminum conductor steel reinforced
BPD	Barrels Per Day
Basin Electric	Basin Electric Power Cooperative
Central Electric	Central Electric Cooperative
East River	East River Electric Power Cooperative, Inc.
EMF	Electric Magnetic Fields
HP	Horse Power
MCM	Million Circular Mills
MW	Mega Watt
MWH	Mega Watt Hour
NESC	National Electric Safety Code
PUC	Public Utilities Commission
ROW	Right-of-way
RUS	Rural Utilities Service
SDAR	South Dakota Administrative Rule
SDCL	South Dakota Codified Law
Western	Western Area Power Administration

1.0 APPLICATION PREFACE

East River Electric Power Cooperative, Inc. (East River) is proposing to construct a 115,000 volt (115 kV) overhead electric transmission line to serve the TransCanada Keystone Pipeline pump station #22. This station is located in Section 20, T106N, R57W, Miner County, South Dakota.

This entire project is referred to in this application as the "Roswell Line Tap" or as the "Project".

The Roswell Line Tap will include:

- Constructing approximately 22 miles of 115 kV overhead transmission line.

This application meets the requirements set forth in South Dakota Codified Law (SDCL) 49-41B and South Dakota Administrative Rule (SDAR) 20:10:22. The balance of this document includes the application, supporting exhibits, and supporting documents. In accordance with SDCL 49-41B-22, East River establishes that:

1. The proposed facilities comply with all applicable laws and rules;

2. The facilities will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area;

3. The facilities will not substantially impair the health, safety or welfare of the inhabitants; and

4. The facilities will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government.

East River respectfully requests the Public Utilities Commission (PUC) of South Dakota to make complete findings and render a decision to grant a permit to construct the transmission facilities upon such terms, conditions or modification of the construction, and operation or maintenance as the Commission may deem appropriate.

East River Electric Power Cooperative, Inc.

By: _____
Jim Edwards, P.E.
Title: Assistant General Manager-Operations
Date: September 2, 2008

2.0 APPLICATION

This East River PUC application was developed and organized to meet the requirements of the South Dakota PUC rules set forth in SDAR 20:10:22. This application is submitted to the South Dakota PUC and conforms to South Dakota statutes and rules governing energy conversion and transmission facilities.

2.1 Applicant's Verification (SDAR 20:10:22:04)

Truth and accuracy of the application is provided as Applicant's Verification (Exhibit 1)

2.2 NAME OF PARTICIPANTS (SDAR 20:10:22:06)

The applicant's name, address, and telephone number is:

East River Electric Power Cooperative, Inc.
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Madison, SD 57042
(605) 256-4536

Federal ID#: 46-0225402

The individuals authorized to receive communications relating to the application on the behalf of East River are:

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dhaselhoff@dgrnet.com

2.3 NAME OF OWNER AND MANAGER (SDAR 20:10:22:07)

The proposed transmission facilities will be owned by East River. The Project Manager for the Project is:

Jim Edwards
Assistant General Manager-Operations
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2.4 DESCRIPTION OF THE NATURE AND LOCATION OF THE TRANSMISSION PROJECT (SDCL 49-41B-11 (2))

East River is proposing to construct a 22 mile 115 kV transmission line (Exhibit 2) to allow Central Electric Cooperative (Central Electric), headquartered in Mitchell, South Dakota, to serve a pump station for the TransCanada Keystone Pipeline as well as other future loads that Central Electric may serve in the area. The entire Project is referred to in this application as the "Roswell Line Tap" or as the "Project".

The Project will provide for electrical transmission service necessary to meet the electrical demand for the pump station and other loads that may develop in the area.

The transmission line is located in a rural agricultural area comprised of croplands and pasture (Exhibit 3). The 22 miles of transmission line involved in the Project are proposed to be constructed in public and private Right Of Way (ROW). Where the transmission line will be constructed on private ROW easements have been acquired.

2.5 PURPOSE OF FACILITY (SDAR 20:10:22:08)

East River is a consumer-owned, regional power supply cooperative headquartered in Madison, South Dakota. It transmits wholesale electricity to 21 member electric distribution systems in Minnesota and South Dakota. These member systems, in turn, distribute electricity to approximately 86,000 consumer accounts.

The pump station is located in the certified service area of Central Electric and TransCanada has requested electric service from Central Electric for the pump station. Central Electric is a member/owner of East River and has an "All Requirements" contract with East River for East River to provide all of the power and energy requirements of Central Electric. East River also provides all of the transmission facilities required to deliver this power and energy to Central Electric's distribution system.

2.6 ESTIMATED COST OF FACILITY (SDAR 20:10:22:09)

The estimated total cost of the Roswell Line Tap is $3,740,000.

East River will contract with private transmission line contractors to construct the Project. Cost estimates for the Project are based on construction cost histories accumulated during recent construction projects.

2.7 DEMAND FOR FACILITY (SDAR 20:10:22:10)

TransCanada has informed East River that the Keystone Pipeline will initially operate at 435,000 barrels per day (BPD) but will ultimately be operated at 591,000 BPD. At the initial operation of 435,000 BPD, the pump station will have two 5,000 Horse Power (HP) electric drive pumps and will have an estimated peak demand of 7.8 mega watt (MW) and annual energy usage of approximately 50,000 mega watt hour (MWH). At the ultimate operation of 591,000 BPD, the pump station will have four 5,000 HP electric drive pumps and will have an estimated peak demand of 15 MW and an annual energy usage of approximately 87,000 MWH's.

If this facility is not constructed or is delayed, then TransCanada will not be able to operate their pipeline facility until this project or a similar project would be completed.

2.8 GENERAL SITE DESCRIPTION (SDAR 20:10:22:11)

The proposed 22 mile 115 kV transmission line will originate at Western Area Power Administration's (Western) new 230,000 volt (230 kV) Letcher Substation (Exhibit 2) located in Section 1, T104N, R60 W in Davison County. The line will extend north for approximately 0.2 mile in private ROW. Thence the line will enter Sanborn County and continue east in private ROW along the north side of 244th Street for 2.0 miles. There the line will turn north and run along 414th Avenue for 1.5 miles in private ROW. The line will continue on to the north for 1.5 miles in private ROW and at that point will turn east. The line will continue east along the south side of 241st Street in public ROW for 3.0 miles. The line will then cross 241st Street to the north side and continue on to the east for 0.5 mile in public ROW. From that point the line will continue east along 241st Street in private ROW for 1.5 miles crossing into Miner County in the process. The line will cross to the east side of 419th Avenue and run north in private ROW for the first 0.5 miles and then in public ROW for 0.5 miles. The line will again cross back into private ROW for 0.5 miles in Section 8 and then again back into public ROW for the last 0.5 miles. At that point the line will turn east and run along the south side of 239th Street in public ROW for 0.5 miles and then cross into private ROW and continue on for 4.0 miles. There the line will cross back on to public ROW for 0.5 miles. The line will then cross to the east side of 424th Avenue, turn north and first run for 2.0 miles in private ROW and then 1.0 mile in public ROW. The line will then turn east again and follow in public ROW the south side of 236th St for almost 1.5 miles. The line will then continue east for approximately 0.5 miles in public ROW to a point directly across from the Keystone pump station where the line will turn to the north, cross over 236th St and terminate at a new East River substation constructed adjacent to the Keystone pump station site.

We are not aware of any cemeteries, places of historical significance, transportation facilities or other public facilities adjacent to or abutting the transmission site. Attached to this application is a map showing occupied and unoccupied residences in the Project area. (Exhibit 4).

2.9 PROJECT ALTERNATIVES (SDAR 20:10:22:12)

This section provides information for evaluating and weighing potential transmission line alternatives for this Project including the general criteria used to determine the alternatives and an evaluation of the different alternatives for the Project.

2.9.1 General Criteria for Determining Project Alternatives

Siting of transmission lines generally requires two different engineering evaluations and decisions with different criteria on the alternatives. First there was the evaluation and decision on the high voltage source for the transmission line which is where we will tap the high voltage transmission system to supply the

power. Second, there was the evaluation and decision on the actual line route from the decided upon high voltage source to the end distribution substation located near the electric load to be served from the distribution substation.

High Voltage Source Criteria

One criteria in the evaluation of high voltage sources is their capacity to provide the necessary power at the required voltage level to supply the estimated electric loads, both existing and future loads, that may be served from the proposed transmission line. Another criterion is the length of the transmission line required between each of the high voltage sources being evaluated is taken into consideration. Quality of electric service from a shorter line should be better than that received from a longer transmission line as the shorter line is less impacted by inclement weather conditions. The overall cost of the transmission lines and upgrades to the high voltage sources needed to serve the proposed project are taken into consideration and other operating problems. The longer the transmission line, the higher the cost to construct the transmission line.

Typically a 115 kV voltage source can provide better service and more capacity than a 69 kV voltage source, due to the 115 kV being able to provide a more robust service but the 115 kV voltage source and line is also typically more expensive. The existing transmission facilities in the area, the upgrades to facilities required to serve the load, and the magnitude of the load will determine whether the 115 kV or the 69 kV source is the best option.

Transmission Line Route Criteria

One criterion for evaluation of the transmission line routing is environmental constraints. There are many areas in Eastern South Dakota with significant wet areas used by wildlife as well as wet areas that make it extremely difficult to construct and maintain a transmission line in. Other criteria considered are the impact to existing homes and trees. Landowners prefer not to have a transmission line going by their house, nor do the want their trees trimmed or removed. So avoidance of occupied homes and trees when possible is important. The impact to existing utilities, both overhead and underground, is also considered. The location of existing utilities may be such that space for the proposed Project to exist in is not available. Also, the overall cost of transmission line is considered.

2.9.2 Project Alternatives

Due to the location of the pump station, the magnitude of the load and the size of the motors and the size of the existing loads on East River's existing 69,000 volt (69 kV) transmission line in the area, East River identified and evaluated several options for serving the pump station including 115 kV and 69 kV options.

To serve the pump station from a 115 kV source and a 115 kV transmission line, three alternatives were identified. (Exhibits 5, 6, 7 & 8)

1. Request a new 230/115 kV interconnection be built by Western on its existing 230 kV transmission line between Basin Electric Power Cooperative's (Basin Electric) 230 kV Storla substation and East River's 230 kV V.T. Hanlon substation. Then construct a new 22 mile 115 kV transmission line from the new 230/115 kV interconnection to Keystone pipeline pump station #22. (Exhibit 5 & 8)

2. Construct a new 37 mile 115 kV transmission line from the existing 230/115 kV Storla Substation to Keystone pump station #22. (Exhibit 6 & 8)

3. Construct a new 230/115 kV transformation at the existing 230/115 kV V.T. Hanlon substation and then construct a new 45 mile 115 kV transmission line to Keystone pipeline pump station #22. (Exhibit 7 & 8)

To serve the pump station from a 69 kV source and a 69 kV transmission line, one alternative was identified. This was to request a new 230/69 kV interconnection be built on its existing 230 kV line Storla to V.T. Hanlon. Then construct a new 22 mile 69 kV transmission line to the Keystone pipeline pump station #22. (Exhibit 5 & 8)

In addition to the 69 kV transmission line and 230/69 kV transformation for the 69 kV alternative, the pump station would need to have additional more expensive variable frequency drives installed in order to start the motors.

2.9.3 Evaluation of Project Alternatives

The transmission service at 115 kV from a new 230/115 kV interconnection near Letcher, SD with Western on its existing 230 kV Storla to V.T. Hanlon line was chosen for the proposed project. This option was considered the best option when considering the criteria for listed above in Section 2.9.1

The two other 115 kV alternatives with new transmission lines from the Storla and V.T. Hanlon substations required considerably longer transmission lines which increased cost and impact to the environment and public and decreased electric system reliability and operability so they are determined not to be viable.

The 69 kV alternative was determined not viable because:

- The system capacity for the 69 kV option would only allow for serving the pump station and required additional equipment at the pump station for starting the large motors. The transmission line would not have adequate capacity remaining to serve other electrical loads in the area.

- The line route for the 69 kV option would be the same line route used by the 115 kV option from Western's Letcher Substation and the 115 kV option provided more capacity and better operability then the 69 kV option.

- The visual differences between a line designed for 69 kV and one designed for 115 kV would be minimal. The 115 kV design would require a 5' to 10' taller pole and 15" longer side mount insulators.

2.9.4 Line Route Selection

In determining the best route for the transmission line, multiple routes were evaluated. Some considerations used in the route determination included separation from existing electric facilities, cooperation of land owners, topographic features, available public ROW, cost, environmental concerns and regulations, and engineering.

The area around the Project consists of many wet areas used by wildlife as well as wet areas that make it extremely difficult to construct and maintain a transmission line. East River also considered the impact to existing homes and trees. Landowners prefer not to have a transmission line in front of their house, nor do they want their trees trimmed or removed. So, avoidance of occupied houses and trees when possible is important. East River also considered the impact to existing utilities both overhead and underground. The location of existing utilities may be such that space for the proposed Project to exist in is not available.

The preferred route for the proposed 115 kV transmission line begins on the east side of Western's Letcher substation and extend directly north for approximately 0.2 mile to a point located on the north side of 244th Street. At that point the proposed 115 kV transmission line will turn east for 2.0 miles. The line will then turn north for 3.0 miles following the west side of 414th Avenue. The line will then continue east along south side of 241st Street for 3.0 miles. The proposed 115 kV transmission line would then cross 241st Street and continue east for 2.0 miles along the north side of 241st Street. The 115 kV line will turn north and extend 2.0 miles north to 239th Street. The 115 kV line would then turn east and extend for 5.0 miles to 424th Avenue. The 115 kV line would then turn and continue to the north for 3.0 miles to 236th Street. The line would then turn east and continue for approximately 2.0 miles to a point directly south of the pump station where the line will then turn north and run onto the pump station site.

Selection of a different alternative, either the high voltage source or transmission line route that were selected, would not impact the use of eminent domain as East River is not planning or anticipating using eminent domain powers for the proposed Transmission Project. Where private right of way can not be obtained from landowners, East River has designed the transmission line so that it is

completely located in the public right of way. Since eminent domain powers are not being used for this proposed Transmission Project, use of an alternative site or route would not reduce the reliance upon use of eminent domain powers.

2.10 ENVIRONMENTAL INFORMATION (SDAR 20:10:22:13)

The proposed Project is located in a rural agricultural area of the State comprised of cropland, pastures and many wetlands. Due to a small population base many roads are either closed or minimally maintained.

The applicant does not foresee any irreversible changes in the existing environment as a result of construction and operation of the Project. Nor does the applicant anticipate any irreversible changes to remain beyond the operating lifetime of the facility.

2.10.1 Environmental Studies and Approvals

East River engaged Kogel and Stanfill Associates to perform a Class III cultural resource survey (Exhibit 9) of the proposed Project and also submitted the necessary information on the proposed Project to five governmental agencies for their review of the Project. The five governmental agencies were the South Dakota Office of the State Historic Preservation Officer (Exhibit 10), U.S. Corps of Engineers (Exhibit 11), U.S. Fish and Wildlife Service (Exhibit 12), S.D. Department of Game, Fish and Parks (Exhibit 13) and the S.D. Department of Environment and Natural Resources (Exhibits14, 15, 16 and 17). Each of these agencies has responded favorably towards the proposed Project. All environmental studies and reviews required for the proposed Project and no additional environmental studies are planned for this proposed Project. The Project will be designed to meet or exceed the United States Department of Agriculture's Rural Utilities Service (RUS) Standards or Approvals and the National Electric Safety Code (NESC).

2.10.2 Noise Levels Associated with Proposed Project.

With respect to noise sensitive issues and the proposed Project, noise from a transmission line can be associated to two causes, corona and wind induced. Corona noise is the result of an electrical break down of the air charged particles near high-voltage conductors. Generally corona noise is only heard under conditions of high humidity and primarily for lines at voltages of 345,000 volts and higher. No noise from corona is expected from the proposed Project under any operating conditions or line loading. Wind induced noise can be either turbulent or Aeolian. Turbulent noise is a characteristic of any structure, artificial or natural and is not considered a nuisance. It is a characteristic of trees and some land forms. Aeolian noise is caused by the wind crossing over the conductor wires. Wind induced noise under all operating and line loading conditions is expected to

be comparable to the existing noise environment and will not have a significant impact on humans or the environment.

The transmission facilities involved in the Project will be designed to meet or exceed the RUS Standards or Approvals and the NESC.

2.11 EFFECT ON PHYSICAL ENVIRONMENT (SDAR 20:10:22:14)

This section provides information on the effect of the proposed transmission line on the physical environment.

2.11.1 Regional Land Forms

The Project lies in the James River Lowland region. This region is part of the Northern Glaciated Plains ecoregion. The Northern Glaciated Plains ecoregion is characterized by a flat to gently rolling landscape composed of glacial drift. The subhumid conditions foster a grassland transitional between the tall and shortgrass prairie. High concentrations of temporary and seasonal wetlands create favorable conditions for duck nesting and migration. Though the till soil is very fertile, agricultural success is subject to annual climatic fluctuations.

The Project will not involve any new roads, grading, filling, or other changes to the topography or regional landforms. As a result, no direct, indirect, or cumulative impacts to regional land forms are anticipated by the project.

2.11.2 Topography

Regional topography is generally characterized by rolling hills and plains. Topographic maps of the Project are provided in Exhibit 18.

2.11.3 Geologic Features

The proposed Project is located in the James River Lowland region which is part of the Northern Glaciated Plains ecoregion comprised of glacial till over Cretaceous Pierre Shale and Fox Hills Formations.

2.11.4 Economic Deposits

The applicant is unaware of any commercially important deposits such as lignite, sand and gravel, scoria and industrial and ceramic quality clay existent within the transmission site.

2.11.5 Soil Type

The soil types in the area of the Project are of Mollisols (Argiaquolls, Haploborolls, and Natriborolls).

2.11.6 Potential for Erosion and Sedimentation

It is not anticipated that the construction of this transmission line will cause erosion or sedimentation problems during the construction and in the future.

2.11.7 Seismic Risks, Subsidence Potential, and Slope Instability

The electric transmission line involved in the Project will be designed and constructed to meet utility standards. As a result, no issues relating to seismic risks, subsidence, and slope instability have been identified. Any potential difficulties due to seismic activities, subsidence and slope instability will be avoided through proper design and construction.

2.11.8 Geological Constraints

No geological constraints have been identified along the transmission line routes and it is not anticipated that any geological constraints will impact the Project.

2.12 HYDROLOGY (SDAR 20:10:22:15)

This section provides information on the hydrology of the Project area and the effect of the proposed Project on surface and groundwater.

2.12.1 Hydrologic Map

The topographic map (Exhibit 18) shows the terrain and drainage patterns in the areas around the Project. As this Project does not involve any new roads, grading, filling, deforestation, or significant vegetation removal, there will be no changes to the current drainage patterns.

2.12.2 Effect on Current Planned Water Uses

The proposed transmission line will not use either municipal or private water and therefore, will have no impacts on any planned water uses by communities, agriculture, recreation, fish, or wildlife.

2.12.3 Surface and Groundwater Use by Proposed Facility

The proposed transmission line will not require consumptive use of or discharge to any surface water body or groundwater.

2.12.4 Aquifer Use by Proposed Facility

The proposed transmission line will not require the use of groundwater as a source of potable water supply or process water.

2.12.5 Water Storage, Reprocessing, and Cooling by Proposed Facility

No water storage, reprocessing, or cooling will be required for the construction or operation of the proposed transmission line.

2.12.6 Deep Well Injection Use by Proposed Facility

No deep well injection would be required for the construction or operation of the proposed transmission line.

2.13 EFFECT ON TERRESTRIAL ECOSYSTEMS (SDAR 20:10:22:16)

The proposed Project follows existing roads and should have no adverse long term impact on the vegetation and wildlife composition within the Project area. No permanent service road will be required that would result in vegetation removal and unauthorized access. Vegetation removal or habitat loss resulting from pole and anchor placement is insignificant. The transmission project will not displace or adversely affect wildlife or aquatic species. The Project will not impact ecologically unique or sensitive habitats including wetlands and aquatic habitats.

2.13.1 Effect on Wildlife

The proposed Project should have minimal impact and disruption of any wildlife within the Project area. It should also only cause an insignificant, if any, change or loss of any wildlife habitat or vegetation in the area.

The Project does not involve any new roads, grading, or deforestation. Vegetation clearing will be restricted to areas immediately around the poles. As a result, the Project should not impact wildlife composition, abundance, or habitat.

East River does not believe the proposed transmission line will in anyway impact the breeding times and places and pathways of migration.

East River has requested comments from the U.S. Fish & Wildlife Service on the environmental aspects of the proposed Project. The response from Mr. Gober, Field Supervisor for the South Dakota Field Office of the U.S. Fish and Wildlife Service finding NO OBJECTION to the proposed project is attached (Exhibit 12).

East River has also requested comments from the South Dakota Game Fish and Parks on the environmental aspects of the proposed Project. Subsequently East River received a response of “Project as described will have no significant impact on fish and wildlife resources” from the S.D. Game Fish and Parks. A copy of

East River's initial letter with the S.D. Game Fish and Parks stamped reply is attached (Exhibit 13).

2.13.2 Effect on Vegetation

The impact to vegetation in the Project area should be minimal. The transmission line is located on road/public ROW, croplands, and pastures. The Project does not include any new roads, buildings, grading, water uses, or other changes to the land that may have a long term negative impact to vegetation. Also, the Project should not cause any future erosion problems which could impact vegetation.

Construction of the Project will have a short term impact on vegetation as a result of vehicle and equipment accessing the structures, material delivery, structure assembly and erection, and stringing of conductors and static wire. Also, there will be some vegetation removal to maintain adequate safety clearances with the overhead lines.

2.14 EFFECT ON AQUATIC ECOSYSTEMS (SDAR 20:10:22:17)

The proposed Project should not adversely impact any aquatic ecosystems. The Project does not directly change or impact any wetlands, streams, or rivers. Also, the Project does not require any new roads, grading filling, or other changes to the existing terrain that could cause erosion or sedimentation problems or would change any existing drainage patterns.

2.15 LAND USE (SDAR 20:10:22:18)

This section provides information concerning the present and anticipated use or condition of the land in the area of the Project.

2.15.1 Land Use Map

The proposed Project crosses a landscape with a predominantly agriculture land use. The Land Use Map (Exhibit 3) depicts land use within the proposed Project corridor. Miner, Sanborn and Davison Counties are currently agriculture use within the Project corridor.

2.15.2 Homes and Persons Displaced

There will be no homes or persons displaced as a result of the construction, operation, or maintenance of the transmission facilities that are part of this Project.

2.15.3 Land Use Compatibility

The proposed transmission line is compatible with the present land uses of the surrounding area. The majority of the proposed transmission line traverses private land that is zoned agricultural. The addition of the power line to the area would have minimal direct or indirect impacts on the already linear features of the landscape, as existing roads, fencing and power lines transect the area. Construction would temporarily alter the area.

2.15.4 Effect on Land Use

The land in the public and private ROW can be used for the same purpose as prior to this Project. The land will be subject to the restrictions as stated in the easements. These restrictions include that trees and structures that might interfere with the safety, operation or maintenance of the line may not be permitted in the ROW.

2.16 LOCAL LAND USE CONTROLS (SDAR 20:10:22:19)

The proposed Project will comply with all applicable zoning requirements. No existing land use controls by any of the governing bodies restrict the use of the land within the proposed Project area for the purpose of constructing and maintaining the transmission line.

The proposed Project does not enter any city of town boundaries. The proposed Project does cross through the rural areas of Miner, Sanborn and Davison Counties. East River has met with the three county commissions. During these meetings East River renewed its francise for its exising electric system within the counties and received a franchise for this proposed Project. East River also presented an overview of the proposed Project to the commissions.

2.17 WATER QUALITY (SDAR 20:10:22:20)

This Project should not adversely impact any wetlands, streams or rivers. The Project will comply with all applicable federal, state and local rules and regulations required for alteration of wetlands, streams, or rivers resulting from the Project. The following are specific measures that would be taken to protect water quality in the proposed Project corridor:

- Construction would be conducted to minimize disturbances around surface water bodies to the extent possible.

- Current drainage patterns in areas affected by construction will be maintained.

- Staging areas for project-related construction equipment would be located in areas that are not environmentally sensitive to control erosion.

- Staging and laydown yards for project-related construction would be established at least 59 feet from waterways or wetlands, if permitted by topography. No vegetation would be cleared between the yard and the waterway or wetland.

- Construction equipment would not be serviced within 25 feet of waterways or wetlands. Equipment would not be fueled within 100 feet of the waterways or wetlands.

- Any spills of fuels or other hazardous materials during construction or system maintenance would be promptly contained and cleaned up.

- Any herbicides used in ROW maintenance would be approved by U.S. Environmental Protection Agency and applied by licensed professions. Application of herbicides would be limited to the extent necessary for regular maintenance of the transmission line.

2.18 AIR QUALITY (SDAR 20:10:22:21)

No significant or long-term impacts to air quality will occur as a result of this Project. Construction traffic may generate some local dust for short duration. However, the use of construction vehicles involved in this Project will be short term at each part of the Project. The Project will comply with all federal, state and local air quality standards and regulations.

2.19 TIME SCHEDULE (SDAR 20:10:22:22)

The current estimated time schedule for the Project is to start construction in the fall of 2008 and complete construction by July 2009.

East River proposes an in-service date of July 1, 2009. A permitting and construction schedule for the Project is provided below;

Project Route Survey	Completed July, 2008
ROW Acquisition	Completed August, 2008
PUC Route Permit Application	Submitted August, 2008
Line Design	June, 2008 to August, 2008
PUC Route Permit Provided	December, 2008
Transmission Line Construction	January, 2009 to July, 2009

2.20 COMMUNITY IMPACT (SDAR 20:10:22:23)

This section reviews the effects the construction, operation, and maintenance of the Project will have on socioeconomic, taxation, agricultural production, population and community, transportation, and cultural resources.

East River believes that the proposed Project will have minimal, if any impact, on housing, land values, or the labor market. East River bases this, in part, on our long history with similar facilities crossing similar rural routes in the states of South Dakota and Minnesota. The physical aspects of the proposed facilities are like other 115 kV lines which already cross the state with little or no economic impact. The land use and characteristics are typical for such a build, and there is nothing unusual in the proposed route that should cause heightened concern.

2.20.1 Forecast of Socioeconomic Impact

This project will provide additional electrical infrastructure in the area to serve the pump station and would be available to serve future electrical needs. No other significant socioeconomic impacts to the local communities and governmental facilities or services are anticipated as a result of this Project.

2.20.2 Property and Other Tax Impacts

East River believes that the proposed Project will not have any dollar value impact on property taxes. For personal property used in the distribution and transmission of electricity, such as with the proposed Project, rural electric cooperatives pay a two percent gross receipts tax pursuant to SDCL 10-36-6. This tax is in lieu of other taxes including property taxes. SDCL 10-36-11. A prorated share of this tax is paid to the individual counties and ultimately distributed to local school districts. SDCL 10-36-7; 10-36-8; and 10-36-10. So, while the facilities themselves will not directly increase property taxes, the increased sales to customers served by this line will increase the overall gross receipts tax paid and bring tax benefits to the area and state.

East River expects the proposed transmission line will place no demands on public services, so there will be no short and long range demands on any tax revenues.

2.20.3 Forecast of Agricultural Impacts

The transmission line in the Project is sited along ROW and property lines. As a result, the Project is not expected to interfere with agricultural operations or result in the loss of croplands. Should damage occur to crops during construction of

this Project, landowners are reimbursed for damages as a normal part of easement costs.

2.20.4 Forecast of Population and Community Impacts

The proposed transmission Project is not expected to impact the population, income, occupational distribution and integration and cohesion of communities of the region.

2.20.5 Forecast of Transportation Impacts

No significant direct, indirect, or cumulative impacts are expected to the transportation systems of cities, counties, and the state as a result of the Project. Short-term impacts may include minor traffic delays caused when wires are strung across roadways. Any such short-term roadway closings would be scheduled with appropriate authorities and marked clearly, and detour routes would be provided as necessary. Construction of the proposed Project would be expected to cause only insignificant and temporary adverse transportation effects to public access as a result of roadway congestion from work vehicles.

2.20.6 Forecast of Cultural Resource Impacts

East River asked the South Dakota Office of the State Historic Preservation Officer to review the proposed Project. A response dated July 25, 2008 from the South Dakota Office of the State Historic Preservation Officer states they find no historic properties affected (Exhibit 10) as a result of the proposed Project.

East River engaged Kogel and Stanfill Associates to perform a Level III Cultural Resources Survey of the proposed Project. A copy of their report is attached to this application. (Exhibit 9)

The transmission line in the Project is sited along ROW and property lines. As such, there are no anticipated impacts to cultural resources as a result of the Project.

2.20.7 Forecast of Impact on Public Services

East River anticipates that the proposed Project will have minimal, if any, demand on public services and does not foresee the need for any extension or expansion of public services within the affected areas due to the proposed project.

The Project does not have any contaminants associated with it that would require coordination with the local and state office of disaster services.

2.21 EMPLOYMENT ESTIMATES (SDAR 20:10:22:24)

East River intends to hire an external contractor to construct the transmission line. We estimate the contractor will have between 10 and 24 employees working on the Project performing various construction tasks. In addition, East River will have one or more of its employees at times reviewing the construction work for safety and quality of workmanship. DGR & Associates will also have from time to time a member of their engineering staff on the construction site to review quality of workmanship.

Once the line is constructed and complete, there will be no new employees that will reside in the area as a result of the Project.

The following Table summarizes the number of people that will work on this project.

Labor used during construction of proposed Project

Right of Way Agent	1
Surveyor	2
Linemen	20 to 24
Contractor Supervisor	1
East River Construction Supervisor	2
Other Supervisory persons	1

2.22 FUTURE ADDITIONS AND MODIFICATIONS (SDAR 20:10:22:25)

At this time, East River does not anticipate any future additions or modifications to this Project that would need to be approved under this permit application.

2.23 RIGHT-OF-WAY ACCESS, CLEARING, WEED CONTROL, AND RESTORATION (SDAR 20:10:22:34)

This section includes information on East River's policies concerning route clearing, restoration, revegetation and weed control.

2.23.1 Vegetation Clearing

The proposed Project is located in public and private ROW. Some vegetation may need to be cleared to provide adequate clearances to the transmission line. East River annually trims vegetation away from its transmission lines for this purpose. It is expected that some additional vegetation will be removed for the Project.

2.23.2 Soils

Any soils removed during borings for the transmission line structures would be used for backfill. Any remaining material would be spread and mounded near the base of the transmission line structures.

2.23.3 Herbicides and Sterilants (Weed Control)

It is East River's policy to use mechanical and manual methods to clear the ROW. However, where the use of mechanical or hand methods are impractical, the selective use of herbicides may be necessary. In these instances, the appropriate Federal and state agencies will be notified, only approved herbicides will be used, and all recommended precautions will be taken.

2.23.4 Construction Site Access

All line segments are either built in ROW with easements that allow access for construction and maintenance purposes, or are built in public ROW along public roads that provide access for construction and maintenance purposes.

2.23.5 Waste Disposal

Vegetation that may be removed from the ROW and debris resulting from the work will be disposed of in a manner approved by local authorities.

2.23.6 Restoration and Revegetation

Those areas requiring revegetation will be reseeded with vegetation recommended by the Soil Conservation Service.

2.24 TRANSMISSION FACILITY DESIGN AND CONSTRUCTION (SDAR 20:10:22:35)

This section includes information on: (1) configuration of poles; (2) line switches, (3) conductor configuration; (4) proposed transmission site and major alternatives; (5) reliability and safety; (6) ROW or condemnation requirements; (7) necessary clearing activities; and (8) underground utility details.

2.24.1 Configuration of Poles

Six basic structure types would be used for the transmission line. The height of the poles, dependent upon clearance of other objects, will range between 65 feet and 95 feet in height.

1. A single wood pole structure configured with three horizontal line post insulators that are staggered supporting the three phase

conductors and one suspension clamp mounted at the top of the structure supporting the shield wire. (Exhibit 19)

2. A single wood pole structure configured with three horizontal line post insulators mounted on one side will be utilized when the structures are located in Public ROW and no easement to overhang private property was obtained. The structure will also be used for small angles. The shield wire will be supported with a suspension clamp. (Exhibit 20)

3. A single wood pole structure with suspension/strain insulators utilized to support the phase conductors for large angles. The shield wire will be supported with deadend clamps at the top of the pole. (Exhibit 21)

5. A two pole H-frame wood structure with suspension insulators to support the phase conductors on large spans (Exhibit 22). The shield wire will be supported on one of the wood poles with suspension clamps. This structure will be utilized in one area of the Project where a water crossing is needed and a single pole structure cannot be utilized.

6. A single wood pole structure configured with a three horizontal line post insulators for supporting the three phase conductors. The middle and bottom insulators would be mounted at the same height to obtain additional ground clearances. The shield wire will be suspended from the top of the structure with a suspension clamp. (Exhibit 23)

2.24.2 Line Switches

No line switches will be installed in this Project.

2.24.3 Conductor Configuration

As proposed, the Project will utilize a 477 MCM Aluminum Conductor Steel Reinforced (ACSR) conductor with a 3/8 extra high strength steel shield wire using 300 foot ruling spans. Only one circuit will be installed on the proposed Project.

2.24.4 Proposed Site and Major Alternatives

The transmission line that is proposed is described in Section 2.8. Alternatives are identified in Section 2.9.

2.24.5 Reliability and Safety

The proposed transmission line will be designed and constructed in full compliance with all applicable NESC electrical performance and safety codes and, as a result, would not present significant impacts posed by safety or electrical hazard to the general public.

Electric Magnetic Fields (EMF)

Based on the research that has been conducted over the past 30 years, exposure to normal 60 Hz electromagnetic field levels found in 115 kV transmission line design is not a major human health issue. The same is true for electric fields.

East River provides as Exhibit 24 a pamphlet entitled "Electric Magnetic Fields Facts" produced by the Western Area Power Administration. The pamphlet provides answers to many of the questions asked by the general public.

On page six of Western's pamphlet the Electric and Magnetic fields for a typical 115 kV overhead transmission line are shown

	Centerline	Edge of ROW	100 ft	200 ft	300 ft
Electric Field kV/M	1.0	0.5	0.07	0.01	0.003
Magnet Field mG	30	6.5	1.7	0.4	0.2

For comparison, on page 4 of the same pamphlet various home appliances are listed along with their respective Magnetic Fields.

Stray Voltage

In the agricultural area of the Midwest, stray voltage problems are typically associated with distribution and service lines directly serving cattle operations on farms. Where a transmission line has been shown to contribute to stray voltage, the electric distribution system directly serving the farm or the wiring on a farm was located directly under and parallel to the transmission line. This is mitigated by not placing transmission lines over or parallel to the electric distribution system serving the farm or the wiring on the farm.

2.24.6 Right-of-way or Condemnation Requirements

East River is not planning or anticipating using eminent domain powers for the proposed Project. Since eminent domain powers are not being used for this Project, use of an alternative site or route would not reduce the reliance upon use of eminent domain powers.

A 50 foot wide easement was sought for the proposed Project.

Where East River has landowner permission, the transmission line is designed to site poles parallel to the road along the road right-of-way line on the private side. The poles are located to generally touch, or, recognizing occasional minor variances that result during construction, be within inches of touching the road right-of-way (which typically will also be the fence line).

Where East River does not have landowner permission, the transmission line is designed to site poles parallel to the road along the road right-of-way on the public side. Again, the poles are located to generally touch, or be within inches of touching, the road right-of-way/fence line.

2.24.7 Necessary Clearing Activities

Some tree clearing activities will need to be completed to maintain the proper safety clearances.

2.24.8 Configuration of Underground Facilities

No underground 115 kV facilities will be required as a part of the proposed Project. Existing overhead distribution lines will be placed underground to allow ROW clearance for the proposed line

2.25 ADDITIONAL INFORMATION IN APPLICATION (SDAR 20:10:22:36)

This application contains all information necessary for the PUC to assess the effects of the proposed facilities pursuant to SDCL 49-41B-7 and 49-41B-11. This application also contains all information necessary to meet the burden of proof specified in SDCL 49-41B-22.

2.26 TESTIMONY AND EXHIBITS (SDAR 20:10:22:39)

List of Preparers

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This document is intended to represent the entire application, including all narratives, analysis, and exhibits.