

Control Number: 38597



Item Number: 1787

Addendum StartPage: 0

PUC DOCKET NO. 38597

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APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY TO AMEND A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE KRUM WEST TO ANNA 345 KV CREZ TRANSMISSION LINE IN COLLIN, COOKE, DENTON, AND GRAYSON COUNTIES



RESPONSE OF ONCOR ELECTRIC DELIVERY COMPANY LLC TO KATIE HAPP'S THIRD REQUEST FOR INFORMATION

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS:

Oncor Electric Delivery Company LLC ("Oncor") files this Response to the aforementioned requests for information.

I. <u>Written Responses</u>

Attached hereto and incorporated herein by reference are Oncor's written responses to the aforementioned requests for information. Each such response is set forth on or attached to a separate page upon which the request has been restated. Such responses are also made without waiver of Oncor's right to contest the admissibility of any such matters upon hearing. Oncor hereby stipulates that its responses may be treated by all parties exactly as if they were filed under oath.

II. Inspections

In those instances where materials are to be made available for inspection by request or in lieu of a written response, the attached response will so state. For those materials that a response indicates may be inspected at the Austin voluminous room, please call at least 24 hours in advance for an appointment in order to assure that there is sufficient space and someone is available to accommodate your inspection. To make an appointment at the Austin voluminous room, located at 1005 Congress, Suite B-50,

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1787

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Austin, Texas, or to review those materials that a response indicates may be inspected at their usual repository, please call Teri Smart at 214-486-4832. Inspections will be scheduled so as to accommodate all such requests with as little inconvenience to the requesting party and to company operations as possible.

Respectfully submitted,

ONCOR ELECTRIC DELIVERY COMPANY LLC

By:

E. Allen Nye, Jr. State Bar No. 00788134 Daniel J. Kelly State Bar No. 24041229 Jaren A. Taylor State Bar No. 24059069

Trammell Crow Center 2001 Ross Avenue, Suite 3700 Dallas, Texas 75201-2975 Telephone: 214-220-7700 Facsimile: 214-999-7700

ATTORNEYS FOR ONCOR ELECTRIC DELIVERY COMPANY LLC

CERTIFICATE OF SERVICE

It is hereby certified that a copy of the foregoing has been emailed or sent via overnight delivery or first class United States mail, postage prepaid, to the propounding party, on this the 3 day of November, 2010.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-01 Page 1 of 1

REQUEST:

Is Oncor LLC aware that a larger portion of the proposed H1023 line goes thru floodway?

RESPONSE:

The following response was prepared by or under the direct supervision of Russell J. Marusak, the sponsoring witness for this response.

Yes.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-02 Page 1 of 1

REQUEST:

Has Oncor Limited Liability Corporation ever constructed and placed in operation any 345 kV power transmission lines in the proposed structures (lattice tower and monopole) in a floodway? If so, where?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Yes. It is not unusual for Oncor's transmission line to be located within or to pass through a floodway as there are typically few habitable structures and other constraints that might otherwise impede the routing of a transmission line. Should the PUC approve a route that passes through a floodway, Oncor will work with the landowner and the applicable County Floodplain Administrator in locating structures and constructing the transmission line in order to mitigate any potential adverse impacts to the floodway.

Oncor does not track which transmission lines are built in a floodway. However, one example of a 345 kV double-circuit line built in a floodway is the West Levee-Watermill Line of which a portion is built between the levees of the Trinity River in Dallas County.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-03 Page 1 of 1

REQUEST:

Specifically, what steps would need to be taken to ensure that removing vegetation and modifying the flood way could not result in flooding issues downstream and the flows would not move through the area faster?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Until the PUC has approved a route, preliminary design activities and pre-construction planning will not be complete. Once a route is approved, if a portion of the transmission line is to be located within a floodway, then Oncor will contact and work with the County Floodplain Administrator to ensure that any removal of vegetation and placement of structures will not adversely impact the floodway, including acquiring permits as needed.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-04 Page 1 of 1

REQUEST:

How much vegetation and trees will be removed along creeks and in floodway along line H1023? In areas, not along creek will all trees be removed in the ROW or just have their tops cut off?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Until the PUC has approved a route, preliminary design activities and pre-construction planning will not be complete. Once a route is approved, on-the-ground surveys will identify wetland and riparian areas along the proposed right-of-way. Selective cutting is better suited for such areas in maintaining the environmental integrity and preventing erosion or wash out along creek and river banks. In those areas not designated as riparian or wetland areas, clear cutting will remove all trees and woody vegetation down to within inches of the ground line with ground cover (grasses, low growing foliage) remaining.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-05 Page 1 of 1

REQUEST:

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What additional test or analysis will need to be conducted in order to safely place the transmission lines in a floodway? Will soil bearing capacity test in the floodway during wet and dry weather conditions be included?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Soil testing is a routine analysis done during any new construction project. Soil boring will be done as part of the pre-construction activities and samples will be taken at or near potential structure locations. Results will be used to design the appropriate foundation to maintain the safety and reliability of the structure as well as the overall transmission line. Due to the depths that the soil sample will be taken, the same results will be seen regardless of weather conditions.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-06 Page 1 of 1

REQUEST:

What additional agencies would need to approve construction in a floodway i.e. FEMA....?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor will work with the County Floodplain Administrator in complying with all state and federal requirements in placing transmission line structures within designated floodways. Based on the information available at this time, no additional agencies will need to approve Oncor's construction of the transmission line across a floodway.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-07 Page 1 of 1

REQUEST:

The City of Denton Codes does not allow modification to the Flood Plain in this area. It must be kept in its natural state. How will the City Code be addressed?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor will work with the City of Denton to comply with the codes specific to constructing the transmission line across designated floodplains. But until detailed planning is completed the precise details of how Oncor will comply are not available.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-08 Page 1 of 1

REQUEST:

What additional costs are associated in building in a floodway?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

The only additional cost associated with constructing the transmission line across the floodway is the increased size, depth and load bearing capacity of foundations for structures that may be located within the floodway as well as any mitigation that may be required to prevent or repair rutting by heavy equipment.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-09 Page 1 of 1

REQUEST:

What additional time is required to build in a floodway?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

There is little or no impact to the time required to design and construct as a result of placing a transmission line across a floodway.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-10 Page 1 of 1

REQUEST:

What are the additional concerns or requirements that need to be addressed when building in a floodway?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor will evaluate structure placement within the floodway, will design and construct structure foundations specific to their location within the floodway, and will work with the County Floodplain Administrator and other local, state and federal entities to properly address and adhere to any requirements for constructing the transmission line project across designated floodways.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-11 Page 1 of 1

REQUEST:

What additional structural requirements are needed to ensure transmission line stability in a floodway?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor has successfully constructed, operated and maintained transmission lines across floodways for many years. Soil testing and structure foundation design are standard steps that Oncor takes in ensuring the stability of structures and the safe and reliable operation of any transmission line. Until retailed planning is completed, it is not possible to determine what additional structural requirements will be required.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-12 Page 1 of 1

REQUEST:

On H1023, the proposed transmission lines changes direction at least 4 times. What additional structural requirements are needed for towers when they change direction?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

For those locations where the transmission line changes direction, an angle structure will be required. Angle structures are specifically designed to turn the transmission line a range of angles. For example, a small angle structure may turn the line between 5 and 10-deg. Oncor has a "family" of structures that are standardized to include a tangent (or straight line) structure; small, medium and large angle structures; and a "deadend" structure (which is used when turning a heavy angle, greater than 25 to 30-deg). In addition to a different structure type, angle structures also typically require larger and/or deeper foundations due to the increased loading on the structure.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-13 Page 1 of 1

REQUEST:

At the point where the transmission line changes direction and crosses FM 428, what is the tension in each line at an ambient temperature of 10 degrees Fahrenheit, and what is resulting force on the tower at the corner.

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Until the PUC has approved a route, preliminary design details are not developed. Line tensions are dependent on a number of factors including the conductor and the amount of the angle being turned by the structure. Currently those details are not available.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-14 Page 1 of 1

REQUEST:

What is size and weight of proposed lines? What is size and weight of towers used when changing direction?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

The typical lattice steel tower (125-ft tangent) weighs approximately 22,000 lbs. The equivalent in a monopole (120-ft tangent) weighs approximately 33,000 lbs.

The lattice steel angle towers (120-ft to 130-ft tall) weigh between 38,000 and 57,000 lbs per structure depending on the amount of angle. The steel angle monopoles (120-ft tall) weigh between 40,000 and 84,000 lbs per structure depending on the amount of angle.

Conductor type for the proposed project is twin-bundled (two wires per phase) 1926.9 ACSS/TW which is 1.545-inches in diameter and weighs 2.471-lbs per foot. Assuming that a structure were to support the weight of ½ of the preceding span and ½ of the succeeding span, the total weight on the structure of the conductor alone would be nearly 33,000 lbs for an 1,100-ft span typical of lattice steel tower construction and about 21,000 lbs for a 700-ft span typical of steel monopole construction.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-15 Page 1 of 1

REQUEST:

What has Oncor Limited Liability Corporation done to prevent the said tower, located in a floodway, from tilting or falling during wet weather or flood conditions, and what said will be done to protect the safety of motorist on FM 428?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor has built many transmission lines that pass through floodplains and areas prone to flooding and standing water. There has not been any incident where a tower tilted or fell over due to flooding. Prior to construction, soil testing will be done to determine the depth and composition of the ground where structures will be placed. The data from this testing will be used to design a foundation specific to the structure type, the location and the make-up of the firmament. This will ensure that the structure will remain stable even during flood events.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-16 Page 1 of 1

REQUEST:

Is Oncor LLC aware of the 30' LP gas pipeline that runs generally parallel to the road Elm Bottom Circle, a significant portion of segment H1023?

RESPONSE:

The following response was prepared by or under the direct supervision of Russell J. Marusak, the sponsoring witness for this response.

No.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-17 Page 1 of 1

REQUEST:

What are the specific easement guidelines with this LP gas pipeline, specifically regarding the building of structures including, but not exclusive to, 345kv lattice and monopole towers?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor is not aware of any easement guidelines regarding transmission line construction activities. Oncor's intent is to locate the transmission line in the center of new right-of-way which will be adjacent to and not overlapping the pipeline right-of-way. For those pipelines that will cross the transmission line right-of-way, structures will be positioned such that foundations will be well clear of the pipeline and there will be no potential for "digging into" the pipeline during construction. Oncor will coordinate with the pipeline company to ensure that the proper location of the pipeline is identified well in advance of construction.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-18 Page 1 of 1

REQUEST:

Has Oncor LLC ever constructed 345 kV lattice and/or monopole towers parallel to a 30' LP gas line? How many times did that construction criss-cross the pipeline? What was the distance it ran parallel to the line, and what was the "buffer" distances between the gas line and the power lines?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Yes. It is not unusual for Oncor's new or existing transmission lines to either parallel or cross all types of pipelines. For the proposed project, there are a number of locations that can be seen on the notice maps where Oncor is proposing to either cross a pipeline or parallel one for some distance. The distance parallel to pipelines is one of the routing criteria that Halff delineated in Table 7-1 of the Environmental Assessment (Attachment 1 to the application).

Oncor is experienced in constructing transmission lines, including structure foundations, in right-of-way that is adjacent to or near a pipeline. Conversely, Oncor is also familiar with new pipelines crossing or paralleling their existing transmission line corridors. There is no particular defined "buffer" between transmission lines and pipelines although Oncor's preference is to have the edge of the transmission line right-of-way adjacent to the edge of the pipeline right-of-way with no overlap of easement.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-19 Page 1 of 1

REQUEST:

Can Oncor LLC provide documentation of the official notification of Oneok NGL Pipelines, or other impacted parties, regarding Oncor's intended use of the Elm Bottom Circle LP gas pipeline easement? What are Oncor's legal requirements for notification of intended use of such an easement?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor has no intention of utilizing any pipeline easement other than at crossing locations. Throughout most of the proposed project, other utility easements that are being paralleled are intended to have adjacent, but not overlapping, rights-of-way.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-20 Page 1 of 1

REQUEST:

Can Oncor explain why the 30' LP gas line along the Elm Bottom Circle portion of segment H1023 has not been indicated on official maps that have been presented at meetings as well as included in official documentation sent to intervenors?

RESPONSE:

The following response was prepared by or under the direct supervision of Russell J. Marusak, the sponsoring witness for this response.

Pipelines shown on maps presented at meetings as well as included in official documentation sent to intervenors include selected pipelines provided from Texas Railroad Commission (TRC) data or other pipeline corridors Halff identified in the field. TRC data did not identify a pipeline alignment generally parallel to Elm Bottom Circle. Halff did not identify a pipeline alignment generally parallel to Elm Bottom Circle in the field.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-21 Page 1 of 1

REQUEST:

What are the criteria used to determine a "compatible right of way"?

RESPONSE:

The following response was prepared by or under the direct supervision of Charles T. Jasper, the sponsoring witness for this response.

Please see Oncor's response to PRC Set No. 1, Question No. 1-09.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-22 Page 1 of 1

REQUEST:

How will erosion be prevented if significant numbers of trees are removed from a 'flood way' area?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Although trees may be cut down, low growing vegetation and ground cover will be maintained. In addition, part of the provisions of the Storm Water Pollution Prevention Plan includes establishing environmental controls designed to minimize erosion.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-23 Page 1 of 1

REQUEST:

Has a study been conducted to evaluate potential sedimentation of Clear Creek and the Elm Fork of the Trinity, both a significant part of the Lake Ray Roberts Greenbelt? If not will a study be conducted, and what studies?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor is not aware of any studies done specific to this proposed project evaluating the impact on water quality of Clear Creek or the Elm Fork of the Trinity River. Oncor is required to comply with all state and federal environmental regulations and standards during construction to prevent any negative impact to water quality or environmental integrity.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-24 Page 1 of 1

REQUEST:

How will erosion and sedimentation of Clear Creek and the Elm Fork of the Trinity River be prevented? What are the costs associated with any and all preventative efforts?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Both erosion and sedimentation control are addressed in the Storm Water Pollution Prevention Plan (SWPPP) that will be established prior to the start of construction. The SWPPP is reviewed and approved by the TCEQ and requires Oncor to monitor the provisions of the SWPPP throughout the entirety of construction as well as during the re-vegetation phase following construction. These costs are incorporated in the overall cost of constructing the transmission line project.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-25 Page 1 of 1

REQUEST:

What chemicals are used during the removal of trees and vegetation? Include the chemical compositions of the herbicides and other chemicals used and the concentration on toxic components. What is the half-life of these compounds?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

During initial clear cutting prior to construction, trees and woody vegetation in most areas are cut down utilizing a hydro-ax or some other mechanical means. Once construction is complete, vegetation is routinely maintained by mechanical means so that it does not interfere with the safe operation and maintenance of the transmission line and structures. If Oncor is required to address vegetation issues in its right-of-way, typically herbicides would not be used.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-26 Page 1 of 1

REQUEST:

Are there other ways that chemicals, heavy metals, or other harmful substance would be present in the ROW including the tower and air around the towers because of the transmission line construction, the transmission line, and maintenance? Where applicable include the chemical compositions of the chemicals used. What is the halflife of these compounds?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor does not typically utilize chemicals during construction or maintenance of the transmission line. If Oncor is required to address vegetation control issues in its right-of-way, typically chemical herbicides are not used.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-27 Page 1 of 1

REQUEST:

Are you using traceable levels of phosphates or any notable environmentally impacting chemicals in any studies or construction of lines or actual lines?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

No.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-28 Page 1 of 1

REQUEST:

Please provide a detailed chemical profile including but not limited to phosphates, herbicides, and any other chemical that may be used during the construction and maintenance of the power lines along H1023.

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor does not typically utilize chemicals during construction or maintenance of the transmission line. If Oncor is required to address vegetation control issues in its right-of-way, typically chemical herbicides are not used.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-29 Page 1 of 1

REQUEST:

Have any chemicals that will be used in construction and maintenance of line that can potentially touch the ground or the lower 6 feet of the tower been used in a flood way that has a direct flow into surrounding creeks and rivers?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor does not typically utilize chemicals during construction or maintenance of the transmission line. The potential for contamination from petroleum products during construction as a result of the presence of heavy machinery is mitigated by having plans in place to detect and address any spills, and by having materials on hand for clean-up should such a spill occur. These plans are included in the Storm Water Pollution Prevention Plan that will be established prior to the start of construction.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-31 Page 1 of 1

REQUEST:

Have studies been conducted to evaluate the impact of any and all chemicals on water quality along a riparian, 'flood way' system, including impact on: flora and fauna, soil quality, habitat biodiversity, and aquatic ecosystems?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor is not aware of any studies done specific to this proposed project evaluating the impact on water quality along water ways crossed by Link H1023. Oncor is required to comply with all state and federal environmental regulations and standards during construction to prevent any negative impact to water quality or environmental integrity.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-32 Page 1 of 1

REQUEST:

Are there additional costs associated with the protection and ensuring of the water quality of Clear Creek and the Elm Fork of the Trinity River if transmission line goes through floodway on H1023?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

There are costs included in the overall project cost estimate associated with developing, establishing and monitoring the Storm Water Pollution Prevention Plan that is required for any construction project. In addition, costs have been included in the overall project cost to address environmental controls and erosion prevention. All of these costs are incurred for every construction project that Oncor does, and are not specific to construction in a flood plain.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-33 Page 1 of 1

REQUEST:

Are there additional costs associated with ensuring and protecting flora and fauna, the soil and aquatic ecosystem from chemical contamination if the said line goes through the floodway on H1023?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

There are costs included in the overall project cost estimate associated with such things as: additional pre-construction planning and design considerations to mitigate the impact on the environment and on the landowners, additional personnel to monitor the Storm Water Pollution Prevention Plan during construction, manpower and equipment and materials to control vegetation by primarily mechanical means in order to minimize the use of chemical herbicides, expertise on hand to ensure environmental integrity, and in general, being a good steward of the resources encountered. All of these costs are incurred for every construction project that Oncor does, and are not specific to construction in a flood plain.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-34 Page 1 of 1

REQUEST:

What is the maximum distance that corona generated electromagnetic interference (EMI) can occur with the 345 kV line? If this occurs what can you do to remedy situation?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Nearly all fair weather electromagnetic interference (EMI) is due to improper fittings, poor installation techniques and sometimes the design of the transmission line. Foul weather (rain, fog, heavy dew) will temporarily increase levels of EMI due to corona discharge upon contact between water droplets and the conductors. AM broadcast band is most susceptible to EMI due to the frequency range involved, where FM broadcast band, internet service, GPS and TV signals are all at higher frequencies and are not normally susceptible to transmission line EMI. The electromagnetic fields (EMF) generated by the transmission line will diminish rapidly with increasing distance from the centerline. EMF strength at the edges of the transmission line right-of-way are at or below the strength of EMF emitted by most household appliances, and continues to diminish to background levels as distance from the transmission line increases.

Oncor continues to utilize updated materials and methods of design and construction in order to realize improved performance and reliability of the transmission lines, and concurrently, minimize EMF generated by the transmission line and reduce the potential for EMI.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-35 Page 1 of 1

REQUEST:

If a transmission line tower or line were to fall down in a floodway in standing or moving water (like in the floodway on H1023) would a person or animal be electrocuted if they came in contact with that same water?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Transmission line structures are designed to withstand extreme weather events including hurricanes, floods, high winds and lightning. Because the transmission line system is equipped with automated sensing and control devices, power would be automatically cut off to damaged or severed power lines. As a result of the integrated safety devices incorporated in the transmission system, there is little risk of electrocution during a flood event. In any event, should you encounter a damaged or downed electrical wire, the safest action is to keep people and animals away from the area and report it immediately via 9-1-1.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-36 Page 1 of 1

REQUEST:

Why has Oncor Limited Liability Corporation designed a line that changes direction so close to crossing a public highway?

RESPONSE:

The following response was prepared by or under the direct supervision of Russell J. Marusak, the sponsoring witness for this response.

Routing of transmission lines takes into consideration paralleling roadways consistent with Commission Substantive Rule 25.101 (b)(3)(B)(i)-(iv). Sometimes, constraints and/or other opportunity areas may influence the length of a proposed transmission line route that parallels a roadway, thereby necessitating a change in direction of the route. Because a length of transmission line may be paralleling a roadway, any change in direction will thereby be close to the roadway.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-37 Page 1 of 1

REQUEST:

What has Oncor Limited Liability Corporation done to prevent the said tower, located in a floodway, from tilting or falling during wet weather or flood conditions, and what will be done to protect the safety of motorist on FM 428.

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

See Oncor's response to Happ RFI Set No. 3, Question No. 3-15.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-38 Page 1 of 1

REQUEST:

Has Oncor Limited Liability Corporation ever constructed and placed into operation any 345 kV power transmission lines?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Of the more than 15,000 circuit miles of transmission lines that Oncor owns and operates, more than 1/3rd is 345 kV transmission lines. Oncor and its predecessors began transmission line operations in the early 1900's and continue to operate, own and maintain transmission and distribution systems throughout northern, western and central portions of Texas. As part of the CREZ initiative to bring wind power to the load centers from West Texas, the Public Utility Commission of Texas entrusted to Oncor 850 miles of new transmission line construction.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-39 Page 1 of 1

REQUEST:

Does Oncor Limited Liability Corporation have trained crews and equipment to service and repair the proposed construction of a 345 kV power transmission line?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Yes. Oncor has trained and experienced utility crews that handle the day-to-day operations, inspections and maintenance, and are available to handle service calls and repairs in a timely manner. In addition, Oncor has a long-standing relationship with several construction companies that are available at a moment's notice to assist in restoring service and making repairs as needed, in addition to their typical construction of new and upgraded transmission line projects.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-40 Page 1 of 1

REQUEST:

What provisions has Oncor Limited Liability Corporation made to handle downed transmission lines or towers and to provide public safety?

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

Oncor designs and constructs all of its transmission lines to comply with all applicable codes and standards, including the National Electrical Safety Code. Oncor operates and maintains all of its transmission lines in a manner that complies with all applicable safety and reliability codes and standards, including North American Reliability Corporation Reliability Standards. Oncor's transmission system, and the grid as a whole, is equipped with sensors and communication lines that sense faults and failures, and communicate those conditions back to the transmission grid operator when a problem has occurred and cannot be cleared by the usual automated methods. Oncor's system is monitored 24/7 and crews are always available on standby in case of a damaged or downed transmission line.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-41 Page 1 of 1

REQUEST:

What is the cost per kilowatt hour of electricity from the new power source, calculated at the same rate of return on capital investment as electricity delivered to consumers from the existing power source?

RESPONSE:

The following response was prepared by or under the direct supervision of Kenneth Donohoo, the sponsoring witness for this response.

Oncor is a regulated electric distribution and transmission business that provides reliable electricity delivery to consumers. Oncor does not produce or sell energy and therefore has no business reason to obtain and maintain information on the cost of electricity from a new power source verses an existing power source. In summary, Oncor does not have the information requested.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-42 Page 1 of 1

REQUEST:

What is the present electrical consumption in the proposed service area?

RESPONSE:

The following response was prepared by or under the direct supervision of Kenneth Donohoo, the sponsoring witness for this response.

The proposed Krum West – Anna 345 kV line is intended to facilitate delivery of west Texas wind generation to the metroplex. The metroplex area (here-in defined as Dallas, Tarrant, Collin, Denton, Johnson, Ellis, Kaufman and Rockwall counties) serves a peak demand of approximately 20,000 Megawatts. The annual electrical consumption in the area, assuming a load factor of 0.52, is roughly 90,000,000 Megawatt hours.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-43 Page 1 of 1

REQUEST:

What is the average or typical cost to the consumer per kilowatt hour?

RESPONSE:

The following response was prepared by or under the direct supervision of Kenneth Donohoo, the sponsoring witness for this response.

Oncor does not have information responsive to this request. However, there is a public website <u>www.powertochoose.org</u> that provides information on the rates offered by retail providers to consumers in the area.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-44 Page 1 of 1

REQUEST:

How much electrical power will be delivered to this service area by the proposed new construction?

RESPONSE:

The following response was prepared by or under the direct supervision of Kenneth Donohoo, the sponsoring witness for this response.

The proposed line will be constructed with a capacity to deliver up to 5973 Megawatts of power. How much energy will be delivered by this line is dependent on the dispatch and location of generation and the amount and location of the load to be served.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-45 Page 1 of 1

REQUEST:

Please provide right-of-way cost estimates used for link H1023.

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

The estimated cost for right-of-way by link for monopoles is approximately \$1.15M for Link H1023.

The estimated cost for right-of-way by link for towers is approximately \$1.84M for Link H1023.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-46 Page 1 of 1

REQUEST:

Please produce all documents relating to the right-of-way cost estimates provided in response to question 45.

RESPONSE:

The following response was prepared by or under the direct supervision of Jill L. Alvarez, P.E., the sponsoring witness for this response.

The information requested is confidential and will be made available only after execution of a certification to be bound by the protective order in this docket.

Please see Oncor's response to Walton RFI Set No. 1, Question Nos. 1-01 and 1-02.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-47 Page 1 of 1

REQUEST:

Please provide all notes related to reconnaissance of link H1023. Please specify the date and type of reconnaissance (e.g. field, helicopter, car] to which the notes relate and by whom the notes were made, including the name, employer and position of the person.

RESPONSE:

The following response was prepared by or under the direct supervision of Charles T. Jasper, Jill Alvarez, and Russell J. Marusak, the sponsoring witnesses for this response.

Dates that included field reconnaissance of Link H1023 are included in Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-9, along with personnel. Specifically, these dates are:

- November 18, 2008 car;
- April 26, 2009 car;
- May 28, 2010 car; and
- August 13, 2010 helicopter.

With the exception of Jill Alvarez and Charles Jasper, personnel provided in Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-09 are Halff personnel. Positions of Halff personnel are provided in **Section 8.0, Table 8-1** of the Environmental Assessment and Alternative Route Analysis for the Krum West—Anna CREZ 345 kV transmission line project in Collin, Cooke, Denton, and Grayson Counties (Environmental Assessment), which is included as Attachment No. 1 of the application. Names in Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-09 (other than Jill Alvarez and Charles Jasper) but not found in **Section 8.0, Table 8-1** are Halff personnel that drove a vehicle but otherwise were not involved in the preparation of the Environmental Assessment. Positions of Russell J. Marusak, Charles T. Jasper, and Jill Alvarez are provided in their pre-filed direct testimonies.

Notes responsive to this request include the following:

- Ground reconnaissance photographs (on DVD) Please see Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-03;
- Aerial strip maps with notes Please see Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-04; and
- GIS MXD format annotation files (on CD) Please see Oncor's response to Greenbelt RFI Set No. 1, Question No. 1-04.

Oncor - Docket No. 38597 Happ RFI Set No. 3 Question No. 3-48 Page 1 of 1

REQUEST:

Please provide all documents and workpapers related to Oncor's or Halff's development and evaluation of link H1023.

RESPONSE:

The following response was prepared by or under the direct supervision of Charles T. Jasper, Jill Alvarez, and Russell J. Marusak, the sponsoring witnesses for this response.

Please refer to the Environmental Assessment for information relating to the development and evaluation of Link H1023. Other information in addition to the Environmental Assessment and information provided in Oncor's response to Happ RFI Set 1, Question No. 3-47 is gathered and produced at a study-level scale. This information is voluminous and will be made available in the Austin Voluminous Room.

See Oncor's response to Walton Set No. 1, Question No. 1-13.