

STFC Hearing Ex 1
DK Nbg 2/26/19

**Application of Transource Pennsylvania LLC
Independence Energy Connection-East Project
Docket Nos. A-2017-2640195 and A-2017-2640200**

**Interrogatories of Stop Transource in Franklin County
Set 1
(Supplemental Responses dated 7/27/2018)**

Data Request STFC-01-35:

Identify each and every time that the proposed Route was unable to use parallel alignments along existing utility rights —of—way or other infrastructure, such as roadways and railroads, as discussed by Mr. Baker on P. 9.

Response:

Please refer to the IEC West Siting Study for a discussion of the existing corridors that were analyzed during the siting process.

Supplemental Response:

A primary siting guideline used to evaluate potential transmission line development opportunities is to assess options to parallel existing linear utility (e.g., electric or gas) and transportation (e.g., highway or railroad) rights of way. This guideline for the Rice-Ringgold 230 kV Transmission Line Project was noted in **Section 2.4** (Siting Guidelines; p.8) of the IEC (WEST) Siting Study, which specifically states *“Consider parallel alignments along existing utility ROWs or other infrastructure, such as roadways and railroads.”* The use of roadways as linear features that could potentially be paralleled focused on major interstates and highways, which exhibit relatively direct alignments across the landscape. Although smaller local, county, and state roadways may potentially represent a linear opportunity they are often not practicable due to their generally convoluted alignments, the density of residential or commercial development that borders these roadways, the extent of existing local utility networks bordering the roadways, and potential permitting issues related to safety zone set-backs along state roadways.

Paralleling existing linear features may be advantageous in providing opportunities to minimize potential social and environmental impacts. However, there are often constraints associated with the surrounding land use that may limit the extent to which the potential alignment can follow these features. In many instances these constraints may ultimately make paralleling these features more impactful. This limitation is discussed in **Section 3.3** (Constraints and Opportunities; p. 15) of the Siting Study, which states *“However, the benefits of these opportunity features have to be considered with respect to area land use and other associated effects. For example, if a parallel alignment requires frequent crossing of the existing line to avoid adjacent constraints, then additional aesthetic impacts from many tall crossing structures would need to be considered, as well as the potential for operational and construction impacts associated with outage planning, construction, and maintenance activities. Similarly, while paralleling roads may reduce fragmentation impacts in a heavily forested area, it may also place the line in closer proximity to houses along the road.”*

As part of the transmission line siting review process in Franklin County, Pennsylvania, the IEC Siting Team initially identified several Conceptual Routes between the Rice and Ringgold Substations that avoided large area constraints (e.g., high density residential development, military facilities, and airports) and incorporated notable opportunity features. This process is discussed in **Section 3.4** (Conceptual Route Development; p15-16) of the Siting Study, which noted *"Specific Conceptual Routes identified in the Project Study Area included paralleling Interstate-81 (I-81), regional railroad alignments (e.g., CSX Lurgan Subdivision), local utility corridors such as the Fayetteville-West Waynesboro 138 kV line, as well as traversing the forested slopes of South Mountain."* The use of these Conceptual Routes in the potential identification of Study Segments is further discussed in **Section 3.5.3** (Study Segment Development; p. 17) of the Siting Study, which notes that *"Opportunity corridors identified in the Project Study Area included roads (e.g., I-81 and U.S. Route 11), railroads, (such as the Norfolk Southern railroad line that parallels I-81 and several other local rail lines), as well as a number of transmission line corridors (most of which have a generally north-south alignment). Opportunities to use the undeveloped lands along South Mountain were also evaluated. Development of the Study Segments initially focused on any potential conceptual alignments that could parallel these existing infrastructure features or use areas of undeveloped land."*

The opportunities and constraints of the specific Conceptual Routes that parallel existing linear features are discussed in detail in **Section 3.5.3** (Study Segment Development; p. 18) of the Siting Study, which notes *"Study Segments were developed parallel to I-81 north of Chambersburg where agricultural lands were located adjacent to the highway, however, concentrated development near Scotland and Chambersburg resulted in several alignment shifts away from the highway edge. Opportunities to parallel I-81 south of Chambersburg were also limited due to adjacent development and because the highway continues to travel further to the southwest and away from the Ringgold Substation area. Assessment of U.S. Route 11 noted no paralleling opportunity due to the variable residential and commercial development along this roadway."*

Similar to I-81, the Norfolk Southern railroad offered a few opportunities north of Chambersburg where short Study Segments could be developed, however, the dense development adjacent to the rail corridor limited the length of these alignments. A few local railroad lines south of Chambersburg, specifically the CSX Lurgan Subdivision line, provided more opportunities for parallel alignments. However, many of these railroad alignments were also bordered in certain areas by concentrated residential and commercial structures, especially at road crossings. This resulted in several diversions from parallel alignments to avoid these areas.

The existing transmission line network within the Project Study Area provided several opportunities for paralleling, but most opportunities were limited in length due to the general orientation of the transmission line and the extent of development in the area. North of Chambersburg and west of I-81, residential and commercial development has been built up to the edge of the existing transmission lines and approved planned development in the surrounding open fields limited options to divert from paralleling the existing transmission line alignment in many of these areas. As with the railroads, opportunities were identified south of Chambersburg to parallel longer sections of the transmission line system, specifically the FE Ringgold-West Waynesboro and FE Fayetteville-West Waynesboro transmission lines. Similarly, alignment shifts to bypass developed areas were necessary in several locations."

As noted in these discussions, the options to parallel any specific linear feature in entirety from the Rice Substation to the Ringgold Substation was found to be impracticable due to either the overall direction of the feature alignment or the extent of social development adjacent to the

feature. In many cases, avoiding the developed areas adjacent to these linear features may have resulted in even more social and environmental impacts due to the longer alignment that would have been required. Although specific transmission line alignments evaluated during the Siting Study (e.g., FE Ringgold-West Waynesboro and FE Fayetteville-West Waynesboro) were prominent in the identification of the Proposed Route alignment, they only provided a portion of the alignment as they did not offer direct linkage between the two required endpoints.

For these reasons, the IEC Siting Team identified Study Segments that extended across the landscape of the study area with the prospect of providing direct connectivity between sections of the linear features that could be paralleled. To evaluate all possible alignments within the study area, other cross-country Study Segments were identified that used opportunities of crossing open lands to the west of Chambersburg and the forested lands of Michaux State Forest on the eastern side of the study area. Several of the linear and cross-country alignments were eliminated during the open house review and IEC Siting Team analysis process that narrowed the numerous Study Segments (see **Figure 5**; p.21) down to the three Alternative Routes that were further evaluated (see **Figure 6**; p.29) in the Siting Study.

Through the process described in **Section 4.0** (Alternative Route Comparison; p. 30), the IEC Siting Team provided the rationale for the identification of Alternative Route C as the Proposed Route for the project. Details of the 28.8 mile alignment of the Proposed Route are provided in **Section 3.6.3** (Alternative Route C (28.8 miles); p. 26), which describes the sections paralleling existing linear features that include:

- Interstate-81,
- FE Letterkenny-Grand Point 138 kV Transmission Line which becomes the FE Grand Point-Allegheny Energy 138 kV Transmission Line,
- FE Fayetteville-West Waynesboro 138 kV Transmission Line,
- FE Antrim-West Waynesboro 69 kV Transmission Line,
- FE Ringgold-West Waynesboro 138 kV Transmission Line, and
- FE Reid-Ringgold 138 kV Transmission Line.

At the request of Stop Transource Franklin County (STFC), the following provides a further summary of the specific sections where the Proposed Route was unable to use parallel alignments along existing utility and transportation rights of way. Using Alternative Route C (Proposed Route) description provided in **Section 3.6.3** (p. 26-28) as a guide, these specific sections are noted and discussed as bolded subheadings. Please see STFC 01-35 Attachment 1 for a map of the areas referenced.

- The Proposed Route exits the Rice Substation from the southwest corner and heads south, paralleling the east side of I-81 and spanning along the edge of agricultural fields for approximately 2.2 miles; along this stretch the Proposed Route crosses a stream, Mountain Run.
- The Proposed Route turns sharply east to cross SR 696 perpendicularly and travels approximately 0.6 mile to the east-southeast through an agricultural field before turning sharply to the southwest.
 - **Paralleling the east side of Interstate-81 was not feasible from this point south due to the presence of commercial structures at the Interstate-81 and Route 997 intersection that includes a gas station, a hotel, a restaurant, and two large stores. These commercial areas are further bordered to the east by**

a residential neighborhood. Options to the west side of Interstate-81 are constrained by more residential development (see Box 1 on STFC 01-35 Attachment 1).

- Travelling southwest for 0.7 mile, the Proposed Route crosses a stream, Phillaman Run, and then crosses Black Gap Road (SR 997) in a perpendicular fashion. The Proposed Route traverses for 0.6 mile around the perimeter of the Chambersburg Mall, generally following the outer edge of the parking lot on the northern and eastern sides of the mall, and then heading west to parallel with I-81 again.
- After reaching the eastern side of I-81, the Proposed Route turns sharply south, and parallels the interstate for approximately 1.4 miles and at this location I-81 and the route generally travel in a western direction. Along this section, the Proposed Route traverses the edge of agricultural fields and crosses a stream and the Conococheague Creek.
- The Proposed Route turns sharply to the southwest and travels 0.4 until it reaches the existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the east of this system and parallels it south for approximately 1.6 miles toward U.S. Route 30, spanning along agricultural fields, around the Grand Point Substation, and over Walker Road. The Lost Acres Airport is located approximately 0.6 mile west of the route.
 - **The alignment of the Proposed Route deviates away from the existing FE Letterkenny-Grand Point 138 kV Transmission Line to bypass around the Grand Point Substation, which cannot be spanned (Box 2 on STFC 01-35 Attachment 1).**
- Prior to crossing commercially lined U.S. Route 30, the Proposed Route first crosses over to the west side of the transmission line, which is now the FE Grand Point-Allegheny Energy 138 kV line, and then spans the highway. The route turns sharply west and then south for 0.5 miles spanning across a parking lot and bypassing around a commercial building. After going around the building, the route again parallels the FE Grand Point-Allegheny Energy 138 kV line for 0.5 mile.
 - **The alignment of the Proposed Route deviates from the existing FE Grand Point-Allegheny Energy 138 kV Transmission Line on the south side of U.S. Route 30 due to the limited spacing between two large commercial buildings that were built on either side of the existing transmission line (Box 3 on STFC 01-35 Attachment 1).**
- The Proposed Route deviates from the transmission line corridor for 1.1 mile to bypass around homes along the line. Along this section, the route extends to the southwest and spans a stream, Falling Spring Branch, crosses Falling Spring Road, and traverses through a forested area where homes are present to the east. Within the forest, the route turns south, travels across an agricultural field and spans the FE Grand Point-Allegheny Energy 138 kV line near Henry Lane.
- After crossing this road, the Proposed Route extends to the southeast for approximately 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE

Fayetteville-West Waynesboro 138 kV transmission line. This section involves crossing three streams, several local roadways, and the FE Fayetteville-Allegheny 69 kV line.

- **The alignment of the Proposed Route deviates from the existing FE Grand Point-Allegheny Energy 138 kV Transmission Line north of Falling Springs Road due to the presence of a residential structure. Further opportunities to parallel this linear feature are not practicable due to additional residential constraints south of Falling Springs Road and due the southwesterly alignment of this existing transmission line that directs it away from the southeasterly alignment toward the Ringgold Substation. At this point, the Proposed Route extends for 4.6 mile across the open landscape to Yoho Road where it intersects with the existing FE Fayetteville-West Waynesboro 138 kV Transmission Line, which the Proposed Route follows to the south. Opportunities to parallel the FE Fayetteville-West Waynesboro 138 kV Transmission Line to the north toward the Rice Substation were reviewed, but removed from further assessment due the presence of a large township park (Norlo Park) that would be bisected by the Proposed Route and the high density residential development around U.S. Route 30 that did not allow for developing any alignment through this area. The Proposed Route does span over the existing FE Fayetteville-Allegheny 69 kV Transmission Line near Newcomer Road, but paralleling this utility right of way is impracticable as it extends in a northeast to southwest direction and not toward the Ringgold Substation (Box 4 on STFC 01-35 Attachment 1).**
- As the Proposed Route crosses Yohe Road, it also spans to the east side of the FE Fayetteville-West Waynesboro 138 kV transmission line and then turns sharply to the south to parallel this existing line for approximately 1.7 mile; a stream is crossed in this section, as is Stamey Hill Road.
- A 0.6 mile deviation from the colocation is required in the vicinity of the Manheim Road crossing due residential development that has built up adjacent to the transmission line and the route then parallels the existing line for 0.5 miles on the eastern side.
 - **Paralleling the FE Fayetteville-West Waynesboro 138 kV Transmission Line was not feasible at the Manheim Road intersection due to residential development on the east and west sides of the line and the presence of a distribution substation on the south side of Manheim Road. Other minor deviations away from the line were incorporated to avoid farm structures (Box 5 on STFC 01-35 Attachment 1).**
- At Hess Benedict Road, the Proposed Route crosses over to the west side of the FE Fayetteville-West Waynesboro 138 kV transmission line to avoid agricultural and residential structures. The route parallels the line for another 3.7 miles, traversing agricultural fields, crossing Orphanage Road, Wayne Highway (SR 316), and Buchanan Trail East (SR 16), as well as a stream.

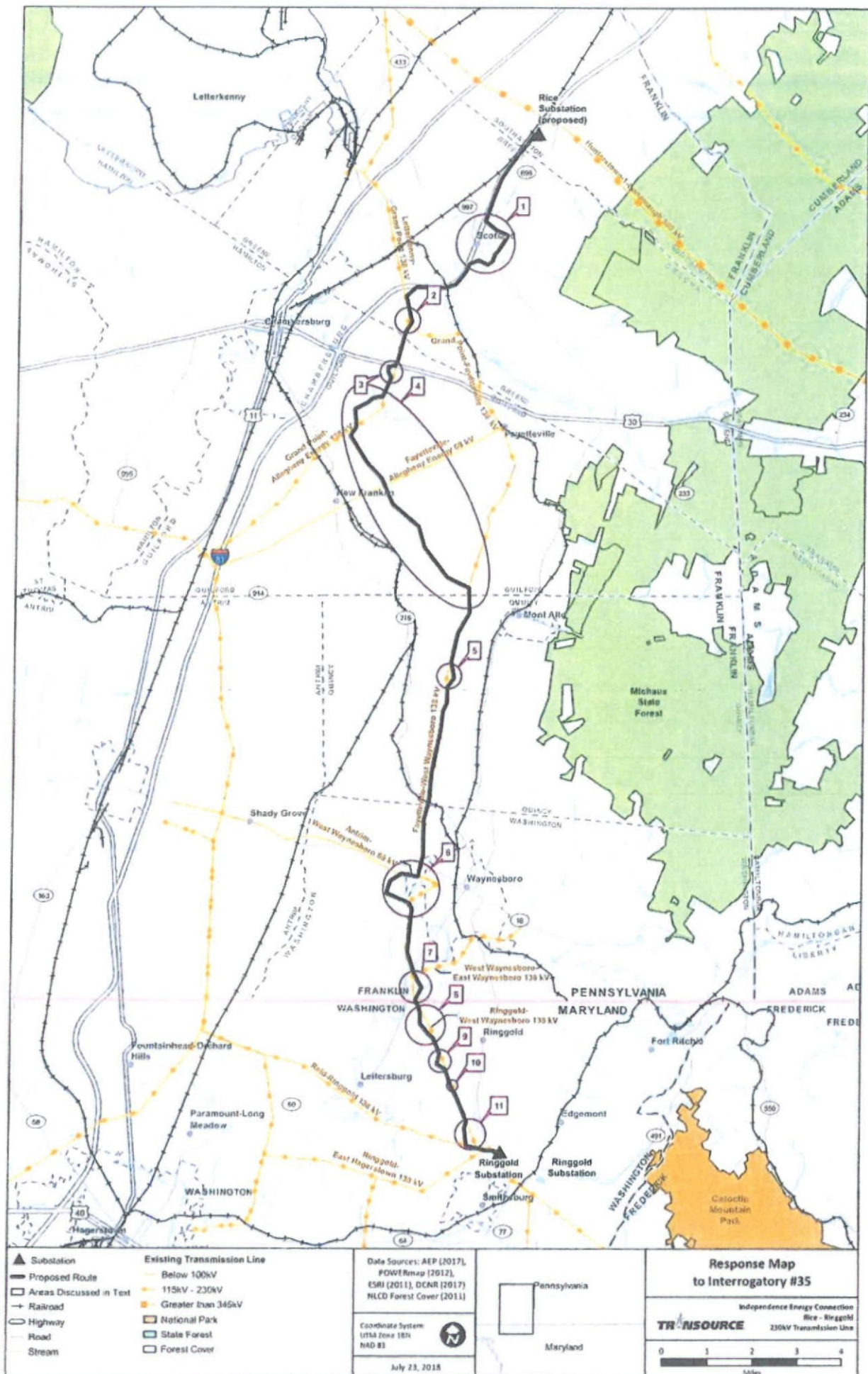
- After crossing SR 16 and spanning the FE Antrim-West Waynesboro 69 kV lines, the Proposed Route turns sharply to the west and parallels this line for approximately 0.4 mile. This stretch includes a crossing of Cold Springs Road and a stream.
 - **The alignment of the Proposed Route deviates from paralleling linear transmission line features at this point as these features extend in an east-to-west fashion on the south side of SR 16. Alternatives to reach another transmission line alignment to the south (FE Ringgold-West Waynesboro 138 kV Transmission Line) were constrained by an approved development plan for a large retirement community in this section of West Waynesboro and existing residential development along Cold Springs Road. Alternatives to the east were impractical as they would extend into more densely developed sections of Waynesboro. A 1.2 mile alignment to the west using open lands was identified as the least impactful option (Box 6 on STFC 01-35 Attachment 1).**
- Turning to the south and then east, the Proposed Route extends for 1.2 miles to Marsh Road. The route traverses an agricultural field to avoid agricultural and residential structures, and crosses a stream, the FE Reid-West Waynesboro 69 kV line, and the FE Ringgold-West Waynesboro 138 kV line.
- After crossing Marsh Road and a stream, the Proposed Route turns sharply south to parallel the east side of the FE Ringgold-West Waynesboro 138 kV line for 2.1 miles. The Proposed Route crosses agricultural fields, Hagerstown Road (SR 316), the FE West Waynesboro-East Waynesboro 138 kV line, and the West Branch Antietam Creek along this stretch. The route extends away from the transmission line corridor to avoid residential structures near the southern end of this section prior to crossing Lyons Road.
 - **Paralleling the FE Ringgold-West Waynesboro 138 kV Transmission Line was not feasible at the Lyons Road intersection due to residential development on the east and west sides of the line (Box 7 on STFC 01-35 Attachment 1).**
- Spanning to the west side of the FE Ringgold-West Waynesboro 138 kV line, the Proposed Route turns south and crosses the Pennsylvania/Maryland state line. The route generally parallels the transmission line for approximately 2.6 miles until it intersects with Gardenhour Road. Some deviations are required along this stretch to avoid agricultural operations and structures. The route in this section crosses Rocky Forge Road, Ringgold Pike (SR 418), Poplar Grove Road, and Newcomer Road, as well as numerous crossings of various tributaries to Little Antietam Creek.
 - **A deviation away from the FE Ringgold-West Waynesboro 138 kV Transmission Line near Rocky Forge Road was incorporated at the request of the landowner to minimize impacts on farming operations (Box 8 on STFC 01-35 Attachment 1).**
 - **A deviation away from the FE Ringgold-West Waynesboro 138 kV Transmission Line north of Poplar Grove Road was incorporated to avoid**

residential and farm structures located adjacent to the existing line (Box 9 on STFC 01-35 Attachment 1).

- **A deviation away from the FE Ringgold-West Waynesboro 138 kV Transmission Line south of Poplar Grove Road was incorporated to avoid a farm structure located adjacent to the existing line (Box 10 on STFC 01-35 Attachment 1).**
- The Proposed Route crosses Gardenhour Road paralleling the existing transmission line for 0.4 miles and traverses through an orchard.
- The Proposed Route extends out for 0.6 mile to the southwest from the transmission line to bypasses around residential structures along Rowe Road and traverses agricultural lands before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
 - **A deviation away from the FE Ringgold-West Waynesboro 138 kV Transmission Line at the Rowe Road crossing was incorporated to avoid residential and farm structures located adjacent to the existing line (Box 11 on STFC 01-35 Attachment 1).**
- The Proposed Route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and Smithsburg Pike (MD 64) along the alignment.

Of the three alternative routes identified and assessed for the Siting Study, the Proposed Route parallels the longest combination of linear features as illustrated in **Table 10** (Constructability Evaluation Criteria; p. 95). This summary notes that of the 28.8 mile length of the Proposed Route, 12.1 miles (42%) of the alignment is located along existing highways or transmission line right of ways.

Witness: Barry A. Baker



Application of Transource Pennsylvania LLC
Independence Energy Connection-East Project
Docket No A-2017-2640195

Production of Documents for Stop Transource in Franklin County Set 1
(Supplemental Responses dated 9/05/2018)

Data Request STFC-01D-26:

All documents that refer or relate to the location of all water wells that are hydrologically connected to the proposed right-of-way.

Response:

Transource has objected to Question No. 26 as overly broad, irrelevant and unlikely to lead to the discovery of admissible evidence. In the Objection, Transource explained that it would provide responsive information that was readily available and would not require an unreasonable search. Notwithstanding or waiving this Objection, Transource notes that responsive documents are being provided with the responses to Stop Transource Requests for Production of Documents and Interrogatories and in the responses Transource has provided to other parties' discovery in this proceeding.

Please see the Company's response to STFC 01D-25.

Supplemental Response:

The Company is not aware of, nor has conducted any investigation or analysis, to determine if water wells are hydrologically connected to the proposed right-of-way or anticipated structure locations for the transmission line.

Witness: Thomas O. Schaffer & Barry Baker