

# DC Cook - Zion 525kV HVDC

## General Information

|                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proposing entity name                                                                                         | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project? | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Company proposal ID                                                                                           | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| PJM Proposal ID                                                                                               | 563                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Project title                                                                                                 | DC Cook - Zion 525kV HVDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Project description                                                                                           | Construct a 2,000 MW, +/- 525 kV HVDC transmission link between Zion Station in Illinois and DC Cook Station in Michigan. Construct two HVDC converter stations, one at each terminal, interconnected to the existing 345 kV system at Zion and the existing 765 kV system at DC Cook. Install approximately 85 miles of $\pm 525$ kV submarine HVDC cable across Lake Michigan, with direct landfall at the Zion and DC Cook sites and associated underground DC connections between the landfalls and converter stations. The project is primarily located on two terminal properties, the Zion site in Illinois and AEP-owned property at the DC Cook site in Michigan. The design will be bipolar with dedicated metallic return for enhanced reliability. |
| Email                                                                                                         | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Project in-service date                                                                                       | 07/2034                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Tie-line impact                                                                                               | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Interregional project                                                                                         | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Is the proposer offering a binding cap on capital costs?                                                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Additional benefits                                                                                           | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Project Components

1. Zion 525kV HVDC Converter Station

2. DC Cook 765/345kV Station upgrades
3. DC Cook 525kV HVDC Converter Station
4. Zion 345kV Station upgrades
5. DC Cook 765kV tie line 1
6. Zion 345kV tie line 1
7. DC Cook - Zion 525kV HVDC Line (MI)
8. DC Cook - Zion 525kV HVDC Line (IL)
9. DC Cook 765kV tie line 2
10. Zion 345kV tie line 2
11. DC Cook - East Elkhart 345kV Line Relocation
12. DC Cook - Dumont 765kV Line Relocation

## Greenfield Substation Component

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Component title         | Zion 525kV HVDC Converter Station                                                                                                                                                                                                                                                                                                                                                                                                                          |                                           |
| Project description     | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |
| Substation name         | Zion HVDC Converter Station                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Substation description  | Construct VSC HVDC converter station at Zion with a DC voltage of +/-525kV with bipole configuration with dedicated metallic return. The converter station will convert DC voltage to AC voltage suitable to interconnect to the 345kV Zion Station (ComEd). The converter station is expected to support applicable interconnection requirements including dynamic reactive power (+/-95%), voltage support, frequency response, fault ride through, etc. |                                           |
| Nominal voltage         | DC                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                           |
| Nominal voltage         | 525                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                           |
| Transformer Information |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
|                         | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Capacity (MVA)                            |
| Transformer             | T01/T02/T03 (Pole 1)                                                                                                                                                                                                                                                                                                                                                                                                                                       | 365 MVA per Transformer 1095 MVA per Pole |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                           |                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------|
|                             | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Low Side                                  | Tertiary          |
| Voltage (kV)                | 335                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 345                                       | 13.8              |
|                             | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Capacity (MVA)                            |                   |
| Transformer                 | Pole 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 365 MVA per Transformer 1095 MVA per Pole |                   |
|                             | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Low Side                                  | Tertiary          |
| Voltage (kV)                | 335                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 345                                       | 13.8              |
| Major equipment description | <p>The Zion HVDC Converter Station is expected to include 362 kV circuit breakers, with associated busbars and disconnected switches, connecting to three single-phase three-winding converter interface transformers on Pole (1) and three similar transformers on Pole (2), with potential AC filters before connecting to DC valve hall which covers valves and power electronics equipment. The valve hall is separately supported by cooling system and control building which is expected to be located within the converter station footprint. The two converter stations are then connected to associated HVDC cable terminations with Pole (1) at +525 kV, Pole (2) at -525 kV, and two connections ultimately joining on the dedicated metallic return (DMR).</p> |                                           |                   |
|                             | Normal ratings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           | Emergency ratings |
| Summer (MVA)                | 2190.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           | 2190.000000       |
| Winter (MVA)                | 2190.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           | 2190.000000       |
| Environmental assessment    | <p>It is assumed the Zion HVDC Converter Station will require an Illinois SWPPP. Additional considerations include existing drainage patterns, site access, and potential threatened and endangered species concerns. No wetlands were identified during the initial desktop review; however, field verification will be needed to confirm.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |                                           |                   |
| Outreach plan               | <p>Given the project's visibility, proximity to sensitive shoreline environments, and anticipated permitting requirements, public engagement will focus on fostering an environment that supports a fair, transparent, and timely regulatory review process. The outreach program will prioritize early engagement, proactive information sharing, and meaningful opportunities for stakeholders to provide input, while building trust with communities, public officials, environmental organizations, and other interested parties on both shores of Lake Michigan.</p>                                                                                                                                                                                                  |                                           |                   |

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|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Land acquisition plan                       | The property for Zion HVDC Converter Station is anticipated to be purchased in fee, as well as any permanent and/or temporary easements required for the support of the transmission line and stations. Additionally, all non-environmental permits, including in support of material delivery, will be captured. |
| Construction responsibility                 | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Benefits/Comments                           | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                                                                                                   |
| Engineering & design                        | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Permitting / routing / siting               | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| ROW / land acquisition                      | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Materials & equipment                       | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Construction & commissioning                | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Construction management                     | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Overheads & miscellaneous costs             | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Contingency                                 | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Total component cost                        | \$1,221,328,803.00                                                                                                                                                                                                                                                                                                |
| Component cost (in-service year)            | \$1,697,361,515.00                                                                                                                                                                                                                                                                                                |
| <b>Substation Upgrade Component</b>         |                                                                                                                                                                                                                                                                                                                   |
| Component title                             | DC Cook 765/345kV Station upgrades                                                                                                                                                                                                                                                                                |
| Project description                         | Company proprietary information.                                                                                                                                                                                                                                                                                  |
| Substation name                             | DC Cook Station                                                                                                                                                                                                                                                                                                   |
| Substation zone                             | AEP                                                                                                                                                                                                                                                                                                               |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substation upgrade scope                    | For DC Cook 765kV station, the existing configuration of a 3-position ring bus in a breaker-and-a-half configuration will be expanded. The new configuration will be 3 strings of breaker-and-a-half with 4 line positions and 7 circuit breakers. One line entrance for Dumont 765kV line will be relocated to an existing deadend structure to allow for the addition of a new string and the addition of two tie lines to the Cook HVDC Converter Station. For DC Cook 345kV station, two 345kV breakers on the low side of 765/345kV transformer #4 will be replaced to increase continuous current ratings and BCT ratios. |
| Transformer Information                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| None                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| New equipment description                   | Four new 765kV, 5000A, 63kA circuit breakers will be added to protect the new lines. Each of the four circuit breakers will have two sets of 765kV, 4000A, 100kA disconnect switches. Replacing two 345kV 3000A, 63kA circuit breakers on the low side of 765/345kV transformer #4 with two 345KV, 5000A, 63KA circuit breakers.                                                                                                                                                                                                                                                                                                |
| Substation assumptions                      | Three existing 765kV A-Frame deadend structures will be reused for the lines. Station service equipment and a spare 345kV power transformer will need to be relocated inside DC Cook 765kV station to support the expansion.                                                                                                                                                                                                                                                                                                                                                                                                    |
| Real-estate description                     | A station fence expansion will not be required, and all work will take place on existing property owned by AEP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Construction responsibility                 | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Benefits/Comments                           | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Engineering & design                        | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Permitting / routing / siting               | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ROW / land acquisition                      | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Materials & equipment                       | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Construction & commissioning                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Construction management                     | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Overheads & miscellaneous costs             | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------|
| Contingency                      | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                           |
| Total component cost             | \$40,859,595.00                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                           |
| Component cost (in-service year) | \$56,785,285.00                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                           |
| Greenfield Substation Component  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                           |
| Component title                  | DC Cook 525kV HVDC Converter Station                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                                           |
| Project description              | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                           |
| Substation name                  | DC Cook HVDC Converter Station                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                                           |
| Substation description           | Construct VSC HVDC converter station at DC Cook with a DC voltage of +/-525kV with bipole configuration with dedicated metallic return. The converter station will convert DC voltage to AC voltage suitable to interconnect to the 765kV yea at DC Cook Station (AEP). The converter station is expected to support applicable interconnection requirements including dynamic reactive power (+/-95%), voltage support, frequency response, fault ride through, etc. |          |                                           |
| Nominal voltage                  | DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                           |
| Nominal voltage                  | 525                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |                                           |
| Transformer Information          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                           |
|                                  | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | Capacity (MVA)                            |
| Transformer                      | T07/T08/T09 (Pole 1)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | 365 MVA per Transformer 1095 MVA per Pole |
|                                  | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Low Side | Tertiary                                  |
| Voltage (kV)                     | 335                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 765      | 13.8                                      |
|                                  | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | Capacity (MVA)                            |
| Transformer                      | Pole 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          | 365 MVA per Transformer 1095 MVA per Pole |
|                                  | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Low Side | Tertiary                                  |
| Voltage (kV)                     | 335                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 765      | 13.8                                      |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Major equipment description                 | <p>The DC Cook converter station is expected to include 800kV rated high voltage circuit breakers, with associated busbars and disconnected switches, connecting to three single-phase three-winding converter interface transformers on Pole (1) and three similar transformers on Pole (2), with potential AC filters before connecting to DC valve hall which covers valves and power electronics equipment. Valve hall is separately supported by cooling system and control building which is expected to be located within the converter station footprint. The two converter stations are then connected to associated HVDC cable terminations with Pole (1) at +525 kV, Pole (2) at -525 kV, and two connections ultimately joining on the dedicated metallic return (DMR).</p>                                                                            |                   |
|                                             | Normal ratings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Emergency ratings |
| Summer (MVA)                                | 2190.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2190.000000       |
| Winter (MVA)                                | 2190.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2190.000000       |
| Environmental assessment                    | <p>Potential Environmental impacts have been reviewed, and the project area will likely result in some wetland impacts requiring permitting and potentially mitigation. The size of the converter station will also likely trigger a Part 91 Soil Erosion and Sedimentation Control (SESC) permit. Other considerations include stormwater management and drainage, potential impacts to stream or drains, threatened and endangered species, cultural resources, and site access or construction activities.</p>                                                                                                                                                                                                                                                                                                                                                  |                   |
| Outreach plan                               | <p>Given the project's visibility, proximity to sensitive shoreline environments, and anticipated permitting requirements, public engagement will focus on fostering an environment that supports a fair, transparent, and timely regulatory review process. The outreach program will prioritize early engagement, proactive information sharing, and meaningful opportunities for stakeholders to provide input, while building trust with communities, public officials, environmental organizations, and other interested parties on both shores of Lake Michigan. Stakeholder mapping should focus on communities and organizations that may be directly or indirectly affected by project facilities, shoreline landfall areas, construction activities, permitting actions, and visual considerations associated with proposed HVDC converter stations.</p> |                   |
| Land acquisition plan                       | <p>Cook HVDC Converter Station will be located on land already owned by AEP.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |
| Construction responsibility                 | <p>Company proprietary information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| Benefits/Comments                           | <p>Company proprietary information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |
| Engineering & design                        | <p>Company proprietary information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |

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|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permitting / routing / siting       | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| ROW / land acquisition              | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Materials & equipment               | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Construction & commissioning        | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Construction management             | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Overheads & miscellaneous costs     | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Contingency                         | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Total component cost                | \$1,250,043,766.00                                                                                                                                                                                                                                                                                                                                  |
| Component cost (in-service year)    | \$1,737,268,601.00                                                                                                                                                                                                                                                                                                                                  |
| <b>Substation Upgrade Component</b> |                                                                                                                                                                                                                                                                                                                                                     |
| Component title                     | Zion 345kV Station upgrades                                                                                                                                                                                                                                                                                                                         |
| Project description                 | Company proprietary information.                                                                                                                                                                                                                                                                                                                    |
| Substation name                     | Zion                                                                                                                                                                                                                                                                                                                                                |
| Substation zone                     | ComEd                                                                                                                                                                                                                                                                                                                                               |
| Substation upgrade scope            | Terminate two 345kV tie lines from Zion HVDC Converter Station (Proposer) to existing Zion Station (ComEd). Re-use existing takeoff towers and circuit breakers and terminate the 345kV tie lines into existing line positions that are currently open. Add new CCVTs, jumpers/connectors, relaying, and control cable for the new 345kV tie lines. |
| <b>Transformer Information</b>      |                                                                                                                                                                                                                                                                                                                                                     |
| None                                |                                                                                                                                                                                                                                                                                                                                                     |
| New equipment description           | Install: Two new sets of 345kV CCVTs (and associated structures, jumpers/buswork, and control cable) and line relaying panels to interconnect the new 345kV tie lines.                                                                                                                                                                              |
| Substation assumptions              | It is assumed the existing 345kV circuit breakers, 345kV disconnect switches, and takeoff towers can be re-used for this project.                                                                                                                                                                                                                   |

|                                               |                                                       |                   |
|-----------------------------------------------|-------------------------------------------------------|-------------------|
| Real-estate description                       | No additional land will be required for this upgrade. |                   |
| Construction responsibility                   | Company proprietary information.                      |                   |
| Benefits/Comments                             | Company proprietary information.                      |                   |
| Component Cost Details - In Current Year \$   |                                                       |                   |
| Engineering & design                          | Company proprietary information.                      |                   |
| Permitting / routing / siting                 | Company proprietary information.                      |                   |
| ROW / land acquisition                        | Company proprietary information.                      |                   |
| Materials & equipment                         | Company proprietary information.                      |                   |
| Construction & commissioning                  | Company proprietary information.                      |                   |
| Construction management                       | Company proprietary information.                      |                   |
| Overheads & miscellaneous costs               | Company proprietary information.                      |                   |
| Contingency                                   | Company proprietary information.                      |                   |
| Total component cost                          | \$3,000,000.00                                        |                   |
| Component cost (in-service year)              | \$4,169,299.00                                        |                   |
| <b>Greenfield Transmission Line Component</b> |                                                       |                   |
| Component title                               | DC Cook 765kV tie line 1                              |                   |
| Project description                           | Company proprietary information.                      |                   |
| Point A                                       | DC Cook Station                                       |                   |
| Point B                                       | DC Cook Converter Station                             |                   |
| Point C                                       |                                                       |                   |
|                                               | Normal ratings                                        | Emergency ratings |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Summer (MVA)                                               | 6625.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6625.000000 |
| Winter (MVA)                                               | 6625.000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6625.000000 |
| Conductor size and type                                    | 6 – 795 kcmil (45/7) ACSR Tern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |
| Nominal voltage                                            | AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| Nominal voltage                                            | 765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |
| Line construction type                                     | Overhead                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |
| General route description                                  | The route will exit the north side of the proposed DC Cook HVDC Converter Station directly into a deadend structure that will turn the tie line west for one span to interconnect into the existing DC Cook 765kV Station. The route will be on existing AEP-owned property.                                                                                                                                                                                                                                                                     |             |
| Terrain description                                        | The terrain of the 765kV tie line is relatively flat with minimal change in grade.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| Right-of-way width by segment                              | The DC Cook HVDC Converter Station - DC Cook Station 765kV tie line 1 will be a 200' ROW. It will generally take the space of the existing Dumont - Cook 765kV ROW for one span and will be crossing over two other existing 69kV ROWs. It will parallel the DC Cook HVDC Converter Station - DC Cook Station 765kV tie line 2.                                                                                                                                                                                                                  |             |
| Electrical transmission infrastructure crossings           | 41.97169, -86.55220, 41.97213, -86.55191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |
| Civil infrastructure/major waterway facility crossing plan | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |
| Environmental impacts                                      | Potential Environmental impacts have been reviewed, and the project area will likely result in some wetland impacts requiring permitting and potentially mitigation. The size of the converter station and surrounding tie line construction will also likely trigger a Part 91 Soil Erosion and Sedimentation Control (SESC) permit. Other considerations include stormwater management and drainage, potential impacts to stream or drains, threatened and endangered species, cultural resources, and site access or construction activities. |             |
| Tower characteristics                                      | This single circuit 765kV tie line is proposed to utilize self-supporting steel lattice tower structures with the phases arranged in a horizontal configuration. All towers are expected to be supported by drilled concrete pier foundations.                                                                                                                                                                                                                                                                                                   |             |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |

Component Cost Details - In Current Year \$

|                                  |                                  |
|----------------------------------|----------------------------------|
| Engineering & design             | Company proprietary information. |
| Permitting / routing / siting    | Company proprietary information. |
| ROW / land acquisition           | Company proprietary information. |
| Materials & equipment            | Company proprietary information. |
| Construction & commissioning     | Company proprietary information. |
| Construction management          | Company proprietary information. |
| Overheads & miscellaneous costs  | Company proprietary information. |
| Contingency                      | Company proprietary information. |
| Total component cost             | \$5,000,000.00                   |
| Component cost (in-service year) | \$6,948,831.00                   |

Greenfield Transmission Line Component

|                     |                                  |
|---------------------|----------------------------------|
| Component title     | Zion 345kV tie line 1            |
| Project description | Company proprietary information. |
| Point A             | Zion                             |
| Point B             | Zion HVDC Converter Station      |
| Point C             |                                  |

|                         | Normal ratings                     | Emergency ratings |
|-------------------------|------------------------------------|-------------------|
| Summer (MVA)            | 1894.000000                        | 2103.000000       |
| Winter (MVA)            | 2254.000000                        | 2390.000000       |
| Conductor size and type | 3 – 954 kcmil (54/7) ACSR Cardinal |                   |

|                                                            |                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal voltage                                            | AC                                                                                                                                                                                                                                                                                                                    |
| Nominal voltage                                            | 345                                                                                                                                                                                                                                                                                                                   |
| Line construction type                                     | Overhead                                                                                                                                                                                                                                                                                                              |
| General route description                                  | The route will exit the west side of the proposed Zion HVDC Converter Station from a new A-frame structure and span directly into existing takeoff towers on the east side of Zion Station. New structures are not anticipated between the Zion HVDC Converter Station fence and existing Zion Station (ComEd) fence. |
| Terrain description                                        | The terrain is flat and the line is anticipated to span over the gravel yard that is between the existing Zion Station (ComEd) and proposed Zion HVDC Converter Station (Proposer).                                                                                                                                   |
| Right-of-way width by segment                              | The Zion 345kV tie line 1 and 345kV tie line 2 are anticipated to encompass a width of approximately 150' and are expected to traverse Transource and ComEd property. Aerial easements will be acquired from ComEd as necessary.                                                                                      |
| Electrical transmission infrastructure crossings           | N/A                                                                                                                                                                                                                                                                                                                   |
| Civil infrastructure/major waterway facility crossing plan | Zion HVDC Converter Station is directly adjacent to Zion 345kV Station. No existing infrastructure will be crossed.                                                                                                                                                                                                   |
| Environmental impacts                                      | No new overhead structures are anticipated between the existing Zion Station (ComEd) and the proposed Zion HVDC Converter Station (Proposer). All necessary environmental permits for this scope, including the Illinois SWPPP, will be captured by Component 1 (Zion HVDC Converter Station).                        |
| Tower characteristics                                      | The proposed Zion HVDC Converter Station is close enough to Zion Station (ComEd) that only the station take off structures will be used to span the distance and intermediate structures will not be needed.                                                                                                          |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                      |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                      |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                                       |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                                                      |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                                                      |
| ROW / land acquisition                                     | Company proprietary information.                                                                                                                                                                                                                                                                                      |

|                                  |                                  |
|----------------------------------|----------------------------------|
| Materials & equipment            | Company proprietary information. |
| Construction & commissioning     | Company proprietary information. |
| Construction management          | Company proprietary information. |
| Overheads & miscellaneous costs  | Company proprietary information. |
| Contingency                      | Company proprietary information. |
| Total component cost             | \$500,000.00                     |
| Component cost (in-service year) | \$694,883.00                     |

### Greenfield Transmission Line Component

|                     |                                     |
|---------------------|-------------------------------------|
| Component title     | DC Cook - Zion 525kV HVDC Line (MI) |
| Project description | Company proprietary information.    |
| Point A             | Zion                                |
| Point B             | DC Cook                             |
| Point C             |                                     |

|                         | Normal ratings        | Emergency ratings |
|-------------------------|-----------------------|-------------------|
| Summer (MVA)            | 2000.000000           | 2120.000000       |
| Winter (MVA)            | 2000.000000           | 2120.000000       |
| Conductor size and type | 2 - XLPE, CU, 2400mm2 |                   |
| Nominal voltage         | DC                    |                   |
| Nominal voltage         | 525                   |                   |
| Line construction type  | Submarine             |                   |

#### General route description

The proposed submarine cable corridor was developed to maximize constructability while minimizing engineering and environmental constraints associated with deep-water installation. The proposed corridor remains in water depths of less than 200 feet for the majority of its offshore length, generally maintaining depths of approximately 150 feet. This avoids areas where greater water depths would introduce additional installation complexity, require specialized construction methods, and increase overall project risk. The eastern shoreline landfall is located on the north side of the Cook Nuclear Power Plant within an existing developed area currently utilized as a parking lot. This location was selected to reduce the required horizontal directional drill (HDD) length to less than approximately 2,000 feet, which is generally considered the practical limit for HDD installation of submarine power cables due to cable pull length constraints and constructability considerations. Reducing the HDD length improves installation feasibility and lowers construction risk between the offshore cable alignment and the onshore interconnection point. In addition, this landfall location helps avoid potential impacts to the nearby Barrier Dune Sanctuary and mapped NOAA reef areas. From the landfall, the cable would be routed across the Cook Nuclear Power Plant property to the southeastern portion of the site, where the proposed Cook Converter Station would be located. By maintaining a shallow-water alignment and utilizing developed landfall locations at both termini, the proposed corridor provides a practical and constructable route that minimizes installation complexity, reduces HDD requirements, avoids sensitive environmental resources where feasible, and supports reliable interconnection between the proposed converter facilities.

#### Terrain description

The in-water routing was selected to lay within constructable water depths ranging from 100-150 feet. A dynamically positioned barge will be used for the majority of the route with jet plow burial in shallow areas (<50feet) where substrate conditions allow. Landfall transitions will be accomplished via the usage of trenchless installation (horizontal directional drill) from a target water depth of 20-25 feet. The terrain of the DC line through Cook powerplant [JF14.1] varies in the vicinity of the candidate converter site -based on the existing topography and soil conditions, it is likely that portions of the site would require fill to establish the substation pad and provide adequate drainage.

#### Right-of-way width by segment

We are proposing a 500-foot Right-of-Way (ROW) for the underwater portions of this project. This will be new ROW. From the landfall on the Cook property to the new convertor location we are proposing a ROW of 30 feet to include the duct bank and vault locations to be installed underground utilizing existing roadway ROW along Cook Place Road and parking lots to the north of the Cook substations. This will be new easement. Our ROW will continue along the eastern edge of the Cook substation. We will be crossing the existing ROW for the 345 and 765 kV lines out of the Cook substation. These areas will be utilizing existing ROW. The segments between the existing ROW will require new ROW.

#### Electrical transmission infrastructure crossings

N/A

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Civil infrastructure/major waterway facility crossing plan | The onshore HVDC route will make landfall in the vicinity of the existing nuclear facility. The converter site will be sited in pre-disturbed area adjacent to the existing Zion substation. Prior to construction and as part of detailed design, comprehensive civil surveys will be conducted to characterize the subsurface utility crossings and potential legacy infrastructure from the existing facility such as deep foundations which may have been capped at grade and abandoned in place. Environmental surveys will be conducted to delineate existing wetland and waterbodies on site.                                                                                                                                                                                                                            |
| Environmental impacts                                      | The line route presents several permitting and environmental challenges. The presence of critical dune areas may require a Part 353 Critical Dunes Permit and coordination with applicable regulatory agencies. Lake Michigan bottomlands and coastal resources will also require permitting and agency consultation. Wetland impacts are possible along the route and will require further evaluation during the delineation and permitting process. These permitting efforts will likely be incorporated into a Joint Permit Application (JPA). A Soil Erosion and Sedimentation Control (SESC) permit will likely be required to support construction activities. Additional considerations include potential NEPA review, sediment management requirements, and measures to minimize turbidity impacts during construction. |
| Tower characteristics                                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ROW / land acquisition                                     | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Materials & equipment                                      | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Construction & commissioning                               | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Construction management                                    | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Overheads & miscellaneous costs                            | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Contingency                                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Total component cost                                       | \$1,012,319,973.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                  |                    |
|----------------------------------|--------------------|
| Component cost (in-service year) | \$1,406,888,104.00 |
|----------------------------------|--------------------|

## Greenfield Transmission Line Component

|                 |                                     |
|-----------------|-------------------------------------|
| Component title | DC Cook - Zion 525kV HVDC Line (IL) |
|-----------------|-------------------------------------|

|                     |                                  |
|---------------------|----------------------------------|
| Project description | Company proprietary information. |
|---------------------|----------------------------------|

|         |      |
|---------|------|
| Point A | Zion |
|---------|------|

|         |         |
|---------|---------|
| Point B | DC Cook |
|---------|---------|

|         |  |
|---------|--|
| Point C |  |
|---------|--|

|  |                |                   |
|--|----------------|-------------------|
|  | Normal ratings | Emergency ratings |
|--|----------------|-------------------|

|              |             |             |
|--------------|-------------|-------------|
| Summer (MVA) | 2000.000000 | 2120.000000 |
|--------------|-------------|-------------|

|              |             |             |
|--------------|-------------|-------------|
| Winter (MVA) | 2000.000000 | 2120.000000 |
|--------------|-------------|-------------|

|                         |                   |
|-------------------------|-------------------|
| Conductor size and type | XLPE, CU, 2400mm2 |
|-------------------------|-------------------|

|                 |    |
|-----------------|----|
| Nominal voltage | DC |
|-----------------|----|

|                 |     |
|-----------------|-----|
| Nominal voltage | 525 |
|-----------------|-----|

|                        |           |
|------------------------|-----------|
| Line construction type | Submarine |
|------------------------|-----------|

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| General route description | <p>The proposed submarine cable corridor was developed to maximize constructability while minimizing engineering and environmental constraints associated with deep-water installation. The proposed corridor remains in water depths of less than 200 feet for the majority of its offshore length, generally maintaining depths of approximately 150 feet. This avoids areas where greater water depths would introduce additional installation complexity, require specialized construction methods, and increase overall project risk. The offshore corridor extends westward across Lake Michigan while maintaining water depths of less than 200 feet. This alignment was selected following engineering evaluations that identified deeper-water areas as less favorable from both constructability and installation perspectives. As the route approaches the western shoreline, the corridor gradually curves southward along the shoreline before making landfall at the proposed Zion Station site, located at the former Commonwealth Edison (ComEd) Nuclear Plant. By maintaining a shallow-water alignment and utilizing developed landfall locations at both termini, the proposed corridor provides a practical and constructable route that minimizes installation complexity, reduces HDD requirements, avoids sensitive environmental resources where feasible, and supports reliable interconnection between the proposed converter facilities.</p> |  |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Terrain description                                        | The in-water routing was selected to lay within constructable water depths ranging from 100-150 feet. A dynamically positioned barge will be used for the majority of the route with jet plow burial in shallow areas (<50feet) where substrate conditions allow. Landfall transitions will be accomplished via the usage of trenchless installation (horizontal directional drill) from a target water depth of 20-25 feet. At the western landfall, the HVDC cable route will extend from the shoreline north of the proposed site and follow existing access roads and developed areas, before connecting to the proposed converter station site. There is little elevation change from the proposed landfall to the proposed converter site. |
| Right-of-way width by segment                              | We are proposing a 500-foot Right-of-Way (ROW) for the underwater portions of this project. This will be new ROW. From the landfall on the Cook property to the new convertor location we are proposing a ROW of 30 feet to include the duct bank and vault locations to be installed underground utilizing existing roadway ROW along the adjacent road and parking lots to the north of the Zion substations. This will be new easement. Our ROW will continue along the western edge of the Zion substation.                                                                                                                                                                                                                                  |
| Electrical transmission infrastructure crossings           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Civil infrastructure/major waterway facility crossing plan | The onshore HVDC route will make landfall in the vicinity of the existing nuclear facility. The converter site will be sited in pre-disturbed area adjacent to the existing Zion substation. Prior to construction and as part of detailed design, comprehensive civil surveys will be conducted to characterize the subsurface utility crossings and potential legacy infrastructure from the existing facility such as deep foundations which may have been capped at grade and abandoned in place. Environmental surveys will be conducted to delineate existing wetland and waterbodies on site.                                                                                                                                             |
| Environmental impacts                                      | The Transission line route presents several permitting and environmental challenges. Wetland impacts may occur along the route and will require further evaluation during the delineation and permitting process. The HVDC disturbance will likely be incorporated into the converter station SWPPP. Additional considerations include potential NEPA review, Threatened and Endangered species, and Lake Michigan permitting considerations.                                                                                                                                                                                                                                                                                                    |
| Tower characteristics                                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                  |                                  |
|----------------------------------|----------------------------------|
| ROW / land acquisition           | Company proprietary information. |
| Materials & equipment            | Company proprietary information. |
| Construction & commissioning     | Company proprietary information. |
| Construction management          | Company proprietary information. |
| Overheads & miscellaneous costs  | Company proprietary information. |
| Contingency                      | Company proprietary information. |
| Total component cost             | \$982,226,409.00                 |
| Component cost (in-service year) | \$1,365,065,084.00               |

### Greenfield Transmission Line Component

|                     |                                  |
|---------------------|----------------------------------|
| Component title     | DC Cook 765kV tie line 2         |
| Project description | Company proprietary information. |
| Point A             | DC Cook Station                  |
| Point B             | DC Cook Converter Station        |
| Point C             |                                  |

|                         | Normal ratings                 | Emergency ratings |
|-------------------------|--------------------------------|-------------------|
| Summer (MVA)            | 6625.000000                    | 6625.000000       |
| Winter (MVA)            | 6625.000000                    | 6625.000000       |
| Conductor size and type | 6 – 795 kcmil (45/7) ACSR Tern |                   |
| Nominal voltage         | AC                             |                   |
| Nominal voltage         | 765                            |                   |
| Line construction type  | Overhead                       |                   |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General route description                                  | The route will exit the north side of the proposed DC Cook HVDC Converter Station directly into a deadend structure that will turn the tie line west for one span to interconnect into the existing DC Cook 765kV Station. The route will be on existing AEP-owned property.                                                                                                                                                                                                                                                                     |
| Terrain description                                        | The terrain of the 765kV tie line is relatively flat with minimal change in grade.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Right-of-way width by segment                              | The DC Cook HVDC Converter Station - DC Cook Station 765kV tie line 2 will be a 200' ROW. It will generally take the space of the existing Dumont - Cook 765kV ROW for one span and will be crossing over two other existing 69kV ROWs. It will parallel the DC Cook HVDC Converter Station - DC Cook Station 765kV tie line 1.                                                                                                                                                                                                                  |
| Electrical transmission infrastructure crossings           | 41.97169, -86.55220, 41.97213, -86.55191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Civil infrastructure/major waterway facility crossing plan | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Environmental impacts                                      | Potential Environmental impacts have been reviewed, and the project area will likely result in some wetland impacts requiring permitting and potentially mitigation. The size of the converter station and surrounding tie line construction will also likely trigger a Part 91 Soil Erosion and Sedimentation Control (SESC) permit. Other considerations include stormwater management and drainage, potential impacts to stream or drains, threatened and endangered species, cultural resources, and site access or construction activities. |
| Tower characteristics                                      | This single circuit 765kV tie line is proposed to utilize self-supporting steel lattice tower structures with the phases arranged in a horizontal configuration. All towers are expected to be supported by drilled concrete pier foundations.                                                                                                                                                                                                                                                                                                   |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| ROW / land acquisition                                     | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Materials & equipment                                      | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Construction & commissioning                               | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Construction management                                    | Company proprietary information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                  |                                  |
|----------------------------------|----------------------------------|
| Overheads & miscellaneous costs  | Company proprietary information. |
| Contingency                      | Company proprietary information. |
| Total component cost             | \$5,000,000.00                   |
| Component cost (in-service year) | \$6,948,831.00                   |

## Greenfield Transmission Line Component

|                     |                                  |
|---------------------|----------------------------------|
| Component title     | Zion 345kV tie line 2            |
| Project description | Company proprietary information. |
| Point A             | Zion                             |
| Point B             | Zion HVDC Converter Station      |

|                           |                                                                                                                                                                                                                                                                                                                       |                   |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Point C                   |                                                                                                                                                                                                                                                                                                                       |                   |
|                           | Normal ratings                                                                                                                                                                                                                                                                                                        | Emergency ratings |
| Summer (MVA)              | 1894.000000                                                                                                                                                                                                                                                                                                           | 2103.000000       |
| Winter (MVA)              | 2254.000000                                                                                                                                                                                                                                                                                                           | 2390.000000       |
| Conductor size and type   | 3 – 954 kcmil (54/7) ACSR Cardinal                                                                                                                                                                                                                                                                                    |                   |
| Nominal voltage           | AC                                                                                                                                                                                                                                                                                                                    |                   |
| Nominal voltage           | 345                                                                                                                                                                                                                                                                                                                   |                   |
| Line construction type    | Overhead                                                                                                                                                                                                                                                                                                              |                   |
| General route description | The route will exit the west side of the proposed Zion HVDC Converter Station from a new A-frame structure and span directly into existing takeoff towers on the east side of Zion Station. New structures are not anticipated between the Zion HVDC Converter Station fence and existing Zion Station (ComEd) fence. |                   |
| Terrain description       | The terrain is flat and the line is anticipated to span over the gravel yard that is between the existing Zion Station (ComEd) and proposed Zion HVDC Converter Station (Proposer).                                                                                                                                   |                   |

|                                                            |                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Right-of-way width by segment                              | The Zion 345kV tie line 1 and 345kV tie line 2 are anticipated to encompass a width of approximately 100' and are expected to traverse Transource and ComEd property. Aerial easements will be acquired from ComEd as necessary.                                                               |
| Electrical transmission infrastructure crossings           | N/A                                                                                                                                                                                                                                                                                            |
| Civil infrastructure/major waterway facility crossing plan | Zion HVDC Converter Station is directly adjacent to Zion 345kV Station. No existing infrastructure will be crossed.                                                                                                                                                                            |
| Environmental impacts                                      | No new overhead structures are anticipated between the existing Zion Station (ComEd) and the proposed Zion HVDC Converter Station (Proposer). All necessary environmental permits for this scope, including the Illinois SWPPP, will be captured by Component 1 (Zion HVDC Converter Station). |
| Tower characteristics                                      | The proposed Zion HVDC Converter Station is close enough to Zion Station (ComEd) that only the station take off structures will be used to span the distance and intermediate structures will not be needed.                                                                                   |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                               |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                               |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                               |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                               |
| ROW / land acquisition                                     | Company proprietary information.                                                                                                                                                                                                                                                               |
| Materials & equipment                                      | Company proprietary information.                                                                                                                                                                                                                                                               |
| Construction & commissioning                               | Company proprietary information.                                                                                                                                                                                                                                                               |
| Construction management                                    | Company proprietary information.                                                                                                                                                                                                                                                               |
| Overheads & miscellaneous costs                            | Company proprietary information.                                                                                                                                                                                                                                                               |
| Contingency                                                | Company proprietary information.                                                                                                                                                                                                                                                               |
| Total component cost                                       | \$500,000.00                                                                                                                                                                                                                                                                                   |
| Component cost (in-service year)                           | \$694,883.00                                                                                                                                                                                                                                                                                   |

## Greenfield Transmission Line Component

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                |                   |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Component title                                            | DC Cook - East Elkhart 345kV Line Relocation                                                                                                                                                                                                                                                                                                                                   |                   |
| Project description                                        | Company proprietary information.                                                                                                                                                                                                                                                                                                                                               |                   |
| Point A                                                    | DC Cook                                                                                                                                                                                                                                                                                                                                                                        |                   |
| Point B                                                    | Thomson                                                                                                                                                                                                                                                                                                                                                                        |                   |
| Point C                                                    |                                                                                                                                                                                                                                                                                                                                                                                |                   |
|                                                            | Normal ratings                                                                                                                                                                                                                                                                                                                                                                 | Emergency ratings |
| Summer (MVA)                                               | 1385.000000                                                                                                                                                                                                                                                                                                                                                                    | 1385.000000       |
| Winter (MVA)                                               | 1750.000000                                                                                                                                                                                                                                                                                                                                                                    | 1750.000000       |
| Conductor size and type                                    | 2 – 954 kcmil (45/7) ACSR Rail                                                                                                                                                                                                                                                                                                                                                 |                   |
| Nominal voltage                                            | AC                                                                                                                                                                                                                                                                                                                                                                             |                   |
| Nominal voltage                                            | 345                                                                                                                                                                                                                                                                                                                                                                            |                   |
| Line construction type                                     | Overhead                                                                                                                                                                                                                                                                                                                                                                       |                   |
| General route description                                  | Re-locate existing towers north to accommodate shifting the Dumont - Cook 765kV line one position north, and providing space for the 765kV tie lines.                                                                                                                                                                                                                          |                   |
| Terrain description                                        | The terrain of the line is relatively flat and expected to mostly impact the DC Cook station property.                                                                                                                                                                                                                                                                         |                   |
| Right-of-way width by segment                              | The DC Cook - East Elkhart 345kV Line will match the existing ROW width of 150'. It will parallel the Dumont - Cook 765kV line.                                                                                                                                                                                                                                                |                   |
| Electrical transmission infrastructure crossings           | N/A                                                                                                                                                                                                                                                                                                                                                                            |                   |
| Civil infrastructure/major waterway facility crossing plan | N/A                                                                                                                                                                                                                                                                                                                                                                            |                   |
| Environmental impacts                                      | Potential Environmental impacts have been reviewed, and the project area will likely result in some wetland impacts requiring permitting and potentially mitigation. Other considerations include stormwater management and drainage, potential impacts to stream or drains, threatened and endangered species, cultural resources, and site access or construction activities |                   |

|                                             |                                                                                                                                                                                                                                          |                   |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Tower characteristics                       | This double circuit 345kV line is proposed to utilize self-supporting steel lattice tower structures with the phases arranged in a vertical configuration. All towers are expected to be supported by drilled concrete pier foundations. |                   |
| Construction responsibility                 | Company proprietary information.                                                                                                                                                                                                         |                   |
| Benefits/Comments                           | Company proprietary information.                                                                                                                                                                                                         |                   |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                          |                   |
| Engineering & design                        | Company proprietary information.                                                                                                                                                                                                         |                   |
| Permitting / routing / siting               | Company proprietary information.                                                                                                                                                                                                         |                   |
| ROW / land acquisition                      | Company proprietary information.                                                                                                                                                                                                         |                   |
| Materials & equipment                       | Company proprietary information.                                                                                                                                                                                                         |                   |
| Construction & commissioning                | Company proprietary information.                                                                                                                                                                                                         |                   |
| Construction management                     | Company proprietary information.                                                                                                                                                                                                         |                   |
| Overheads & miscellaneous costs             | Company proprietary information.                                                                                                                                                                                                         |                   |
| Contingency                                 | Company proprietary information.                                                                                                                                                                                                         |                   |
| Total component cost                        | \$6,000,000.00                                                                                                                                                                                                                           |                   |
| Component cost (in-service year)            | \$8,338,597.00                                                                                                                                                                                                                           |                   |
| Greenfield Transmission Line Component      |                                                                                                                                                                                                                                          |                   |
| Component title                             | DC Cook - Dumont 765kV Line Relocation                                                                                                                                                                                                   |                   |
| Project description                         | Company proprietary information.                                                                                                                                                                                                         |                   |
| Point A                                     | DC Cook                                                                                                                                                                                                                                  |                   |
| Point B                                     | Dumont                                                                                                                                                                                                                                   |                   |
| Point C                                     |                                                                                                                                                                                                                                          |                   |
|                                             | Normal ratings                                                                                                                                                                                                                           | Emergency ratings |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                |             |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Summer (MVA)                                               | 4047.000000                                                                                                                                                                                                                                                                                                                                                                    | 4517.000000 |
| Winter (MVA)                                               | 4484.000000                                                                                                                                                                                                                                                                                                                                                                    | 4961.000000 |
| Conductor size and type                                    | 2 – 954 kcmil (45/7) ACSR Rail                                                                                                                                                                                                                                                                                                                                                 |             |
| Nominal voltage                                            | AC                                                                                                                                                                                                                                                                                                                                                                             |             |
| Nominal voltage                                            | 765                                                                                                                                                                                                                                                                                                                                                                            |             |
| Line construction type                                     | Overhead                                                                                                                                                                                                                                                                                                                                                                       |             |
| General route description                                  | Rerouting a short segment of line one position north in the station, so that there is space for the two new 765kV Converter tie lines.                                                                                                                                                                                                                                         |             |
| Terrain description                                        | The terrain of the line is relatively flat and expected to mostly impact the DC Cook station property.                                                                                                                                                                                                                                                                         |             |
| Right-of-way width by segment                              | The DC Cook - Dumont 765kV Line will match the existing ROW width of 200'. It will parallel the DC Cook - East Elkhart 345kV Line.                                                                                                                                                                                                                                             |             |
| Electrical transmission infrastructure crossings           | N/A                                                                                                                                                                                                                                                                                                                                                                            |             |
| Civil infrastructure/major waterway facility crossing plan | N/A                                                                                                                                                                                                                                                                                                                                                                            |             |
| Environmental impacts                                      | Potential Environmental impacts have been reviewed, and the project area will likely result in some wetland impacts requiring permitting and potentially mitigation. Other considerations include stormwater management and drainage, potential impacts to stream or drains, threatened and endangered species, cultural resources, and site access or construction activities |             |
| Tower characteristics                                      | This single circuit 765kV line is proposed to utilize self-supporting steel lattice tower structures with the phases arranged in a horizontal configuration. All towers are expected to be supported by drilled concrete pier foundations.                                                                                                                                     |             |
| Construction responsibility                                | Company proprietary information.                                                                                                                                                                                                                                                                                                                                               |             |
| Benefits/Comments                                          | Company proprietary information.                                                                                                                                                                                                                                                                                                                                               |             |
| Component Cost Details - In Current Year \$                |                                                                                                                                                                                                                                                                                                                                                                                |             |
| Engineering & design                                       | Company proprietary information.                                                                                                                                                                                                                                                                                                                                               |             |
| Permitting / routing / siting                              | Company proprietary information.                                                                                                                                                                                                                                                                                                                                               |             |

|                                  |                                  |
|----------------------------------|----------------------------------|
| ROW / land acquisition           | Company proprietary information. |
| Materials & equipment            | Company proprietary information. |
| Construction & commissioning     | Company proprietary information. |
| Construction management          | Company proprietary information. |
| Overheads & miscellaneous costs  | Company proprietary information. |
| Contingency                      | Company proprietary information. |
| Total component cost             | \$5,000,000.00                   |
| Component cost (in-service year) | \$6,948,831.00                   |

## Congestion Drivers

None

## Existing Flowgates

None

## New Flowgates

Company proprietary information.

## Financial Information

|                              |         |
|------------------------------|---------|
| Capital spend start date     | 03/2027 |
| Construction start date      | 07/2030 |
| Project Duration (In Months) | 88      |

## Cost Containment Commitment

|                                                                                                                 |                                  |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|
| Cost cap (in current year)                                                                                      | Company proprietary information. |
| Cost cap (in-service year)                                                                                      | Company proprietary information. |
| Components covered by cost containment                                                                          |                                  |
| 1. Zion 525kV HVDC Converter Station - PROPOSER                                                                 |                                  |
| 2. Zion 345kV tie line 1 - PROPOSER                                                                             |                                  |
| 3. DC Cook - Zion 525kV HVDC Line (IL) - PROPOSER                                                               |                                  |
| 4. Zion 345kV tie line 2 - PROPOSER                                                                             |                                  |
| Cost elements covered by cost containment                                                                       |                                  |
| Engineering & design                                                                                            | Yes                              |
| Permitting / routing / siting                                                                                   | No                               |
| ROW / land acquisition                                                                                          | No                               |
| Materials & equipment                                                                                           | No                               |
| Construction & commissioning                                                                                    | No                               |
| Construction management                                                                                         | No                               |
| Overheads & miscellaneous costs                                                                                 | No                               |
| Taxes                                                                                                           | No                               |
| AFUDC                                                                                                           | No                               |
| Escalation                                                                                                      | No                               |
| Additional Information                                                                                          | Company proprietary information. |
| Is the proposer offering a binding cap on ROE?                                                                  | Yes                              |
| Would this ROE cap apply to the determination of AFUDC?                                                         | Yes                              |
| Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable? | No                               |

Is the proposer offering a Debt to Equity Ratio cap?

Company proprietary information.

Additional cost containment measures not covered above

Company proprietary information.

## Additional Comments

None