

BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN

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In the Matter of the Application of American  
Transmission Company, As an Electric Utility,  
to Construct a New 345 kV Transmission Line  
from the Rockdale Substation to the West  
Middleton Substation, Dane County, Wisconsin

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Docket No. 137-CE-147

**DIRECT TESTIMONY OF JAMES B. SIMMONDS**

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1 **Q. Please state your name and address.**

2 A. James B. Simmonds. I reside at 190 East Olmstead Drive, Unit H8,  
3 Titusville, Florida.

4 **Q. Please describe your professional experience.**

5 A. I have spent my entire 40-year career involved in the analysis and  
6 estimation of the costs for installation of underground transmission systems  
7 in this country and abroad. I recently retired from employment with UTEC  
8 Corporation in Boston, Massachusetts. UTEC Corporation is a contractor  
9 for the construction and installation of underground transmission systems.  
10 I worked for UTEC Corporation for 22 years and continue to provide cost  
11 estimate services from time to time to UTEC Corporation.

1           Prior to my experience with UTEC Corporation, I worked for  
2           Robstone Corp. of Miami, Florida, as Supervisor of Underground Projects  
3           in Dade and Broward counties.

4           In addition, I have worked for Nat Harrison Associates, Inc., of  
5           Miami, Florida, where I rose to be in charge of estimating and installation  
6           of distribution lines and underground transmission lines, and was the  
7           Project Manager for the first 500 kV test facility located in Waltz Mills,  
8           Pennsylvania.

9   **Q.   Please describe the types of underground transmission projects for**  
10 **which you have provided estimates.**

11 A.   I have performed hundreds of cost estimates for various underground  
12 transmission projects. These projects involved 69 kV transmission lines to  
13 345 kV transmission lines. The work that I performed was the basis for the  
14 bids submitted to utilities for underground transmission projects. I  
15 estimated the cost of the job including obtaining cost estimates from  
16 suppliers. In that regard I was required to be familiar with the different  
17 technologies available to place transmission lines underground. My  
18 familiarity with underground transmission technologies includes the cost of  
19 the XLPE cable and ductwork technology identified by ATC in its  
20 Underground 345 kV Feasibility Report ("ATC Underground Report"). In

1           addition, I am fully familiar with the pipe type cable used in underground  
2           transmission projects, including High Pressure Gas Filled (HPGF) and High  
3           Pressure Fluid Filled (HPFF) pipe type cables.

4       **Q.   Please identify the utilities for which you provided cost estimate bids**  
5       **regarding the construction of underground transmission projects.**

6       A.   I have provided cost estimates for the placement of transmission lines  
7           underground for most major utilities that have high voltage underground  
8           systems, including: Boston Edison Company; Connecticut Light & Power  
9           Company; Consolidated Edison Company of New York (ConEdison);  
10          Duquesne Light Company; Niagara Mohawk Power Corporation; Northeast  
11          Utilities System; Public Service Electric & Gas (of New Jersey); Long  
12          Island Lighting Co., d/b/a LIPA Long Island Power Authority; New York  
13          Power Authority; The Narragansett Electric Company, Inc.;  
14          Commonwealth Edison Company (ComEd); Arizona Public Service Co.;  
15          Florida Power & Light Company; Florida Power Corporation; South  
16          Carolina Electric & Gas; Dominion Virginia Power; Georgia Power; and  
17          Wisconsin Electric Power Company. In addition, I have provided cost  
18          estimates for the placement of transmission lines underground for the  
19          United States Navy, BICC Cables Corp., and Southwire Company.

1 **Q. How many cost estimates have you provided for projects for the**  
2 **placement of transmission lines underground by Wisconsin utilities?**

3 A. I have performed cost estimates for approximately six underground  
4 transmission projects constructed by Wisconsin utilities.

5 **Q. On whose behalf are you providing testimony in this proceeding?**

6 A. I am providing testimony on behalf of the Coalition for Underground  
7 Alternative.

8 **Q. What is the purpose of your testimony in this proceeding?**

9 A. The purpose of my testimony is to analyze the costs claimed by ATC to  
10 place its proposed 345 kV transmission line underground and to provide my  
11 professional opinions concerning the reasonable costs to place transmission  
12 lines underground.

13 **Q. For what potential routes and transmission line technologies have you**  
14 **analyzed the costs for construction of the transmission line**  
15 **underground?**

16 A. I have provided cost estimates for the underground placement of a  
17 transmission line for the following routes, transmission capacities,  
18 transmission line technologies, and construction methodologies:

19 (1) Exhibit 852 provides estimates for the route described in the ATC  
20 Underground Report, using 345 kV double circuit XLPE cable installed by

1 trenching and ductwork; (2) Exhibit 853 provides estimates for the route  
2 described in the ATC Underground Report using single circuit 345 kV  
3 XLPE cable installed by trenching and ductwork; (3) Exhibit 854 provides  
4 estimates for the Beltline Route using 345 kV double circuit HPFF cable  
5 installed by directional drilling, with polybutane fluid; (4) Exhibit 855  
6 provides estimates for the Beltline Route using 345 kV single circuit HPFF  
7 cable installed by directional drilling, with polybutane fluid; (5) Exhibit  
8 856 provides estimates for the Beltline Route using 230 kV double circuit  
9 HPFF cable installed by directional drilling, with polybutane fluid;  
10 (6) Exhibit 857 provides estimates for the Beltline Route using 230 kV  
11 single circuit HPFF cable installed by directional drilling, with polybutane  
12 fluid; and (7) Exhibit 858 provides estimates for the Beltline Route using  
13 double circuit 138 kV HPGF cable installed by directional drilling, with  
14 nitrogen gas.

15 **Q. What route lengths were used in the cost estimates provided in**  
16 **Exhibits 852 to 858?**

17 A. The length applicable to the route identified in the ATC Underground  
18 Report is 25 miles. The length applicable to the route identified as the  
19 Beltline Route is the distance between Stoughton Road/Highway 51 and the  
20 West Middleton Substation, or approximately 17 miles.

1 **Q. If the transmission line were constructed using the capacities and**  
2 **technologies identified in Exhibits 852 to 858, would it meet the power**  
3 **handling and ampacity needs of the ATC system as identified by**  
4 **Dr. DeMarco in his testimony?**

5 A. Yes, it would.

6 **Q. Does this conclude your prefiled direct testimony?**

7 A. Yes, it does.