

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

FILED
April 4, 2017
Data Center
Missouri Public
Service Commission

In the Matter of the Application of Grain Belt Express)
Clean Line LLC for a Certificate of Convenience and)
Necessity Authorizing it to Construct, Own, Operate,)
Control, Manage, and Maintain a High Voltage, Direct)
Current Transmission Line and an Associated Converter)
Station Providing an interconnection on the Maywood-)
Montgomery 345 kV Transmission Line)

Case No. EA-2016-0358

**ERRATA SHEET FOR SCHEDULE JNC-2 TO
DIRECT TESTIMONY OF J. NEIL COPELAND, P.E.**

Grain Belt Express Clean Line LLC states the following as its errata sheet to the Direct Testimony of J. Neil Copeland, P.E. with regard to his Schedule JNC-2.

1. Pages 3 and 4 of Schedule JNC-2 should be corrected as follows:

a. On page 3 of 4 regarding Missouri Average LMP's (\$/MWh) in the Wind Volatility Sensitivity in 2022 data, there is a correction to the "MO Load Hub LMP" table under the "Change in LMP" column which is highlighted in yellow in the attachment.

b. On page 4 of 4 regarding System Wide Emissions (short tons) in 2022 data, there are corrections in the "Wind Volatility Sensitivity" tables under the "Emissions reduction" column, which are highlighted in yellow in the attachment.

2. These corrections do not change the outcome of the analysis or the opinions of Mr. Copeland.

WHEREFORE, Grain Belt Express Clean Line LLC provides this errata sheet of corrections regarding the Direct Testimony of J. Neil Copeland, P.E.

GB Exhibit No. 128
Date 3.22.17 Reporter mc
File No. EA.2016.0358

Respectfully submitted,

/s/ Karl Zobrist

Karl Zobrist MO Bar No. 28325
Joshua Harden MO Bar No. 57941
Dentons US LLP
4520 Main Street, Suite 1100
Kansas City, MO 64111
Phone: (816) 460-2400
Fax: (816) 531-7545
karl.zobrist@dentons.com
joshua.harden@dentons.com

Cary J. Kottler
General Counsel
Erin Szalkowski
Corporate Counsel
Clean Line Energy Partners LLC
1001 McKinney Street, Suite 700
Houston, TX 77002
(832) 319-6320
ckottler@cleanlineenergy.com
eszalkowski@cleanlineenergy.com

**ATTORNEYS FOR GRAIN BELT EXPRESS
CLEAN LINE LLC**

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served upon all parties of record in this case on this 10th day of March 2017.

/s/ Karl Zobrist
Attorney for Grain Belt Express Clean Line LLC

Missouri Adjusted Production Cost (\$mm)
in 2022

	Business As Usual	Limited Growth	High Growth	Generation Shift	Public Policy
Without Grain Belt	1,951	1,469	2,432	2,499	5,274
With Grain Belt	1,911	1,453	2,369	2,424	5,051
<i>Savings</i>	<i>40</i>	<i>16</i>	<i>63</i>	<i>76</i>	<i>223</i>

Wind Volatility Sensitivity

	Business As Usual	<i>Savings</i>
Without Grain Belt	1,951	
High Wind Volatility	1,911	<i>40</i>
Med Wind Volatility	1,911	<i>40</i>
Low Wind Volatility	1,911	<i>40</i>

Missouri Demand Cost (\$mm)
in 2022

	Business As Usual	Limited Growth	High Growth	Generation Shift	Public Policy
Without Grain Belt	3,333	2,649	5,593	4,295	7,516
With Grain Belt	3,321	2,614	5,596	4,250	7,513
<i>Savings</i>	<i>12</i>	<i>35</i>	<i>(3)</i>	<i>45</i>	<i>2</i>

Wind Volatility Sensitivity

	Business As Usual	<i>Savings</i>
Without Grain Belt	3,333	
High Wind Volatility	3,320	<i>13</i>
Med Wind Volatility	3,321	<i>12</i>
Low Wind Volatility	3,320	<i>14</i>

Missouri Average LMPs (\$/MWh)
in 2022

<u>MO Generation Hub LMP</u>		Business As Usual	Limited Growth	High Growth	Generation Shift	Public Policy
Without Grain Belt	On Peak Average	39.70	34.46	63.54	52.18	89.55
Without Grain Belt	Off Peak Average	32.92	27.21	49.19	42.86	80.27
Without Grain Belt	All Hours Average	36.16	30.66	56.03	47.30	84.69
With Grain Belt	On Peak Average	39.59	33.87	63.64	51.50	89.56
With Grain Belt	Off Peak Average	32.72	26.80	48.91	42.49	79.93
With Grain Belt	All Hours Average	36.00	30.16	55.92	46.79	84.51
<i>Change in LMP</i>	<i>On Peak Average</i>	<i>-0.11</i>	<i>-0.60</i>	<i>0.10</i>	<i>-0.68</i>	<i>0.01</i>
<i>Change in LMP</i>	<i>Off Peak Average</i>	<i>-0.20</i>	<i>-0.41</i>	<i>-0.29</i>	<i>-0.37</i>	<i>-0.35</i>
<i>Change in LMP</i>	<i>All Hours Average</i>	<i>-0.16</i>	<i>-0.50</i>	<i>-0.11</i>	<i>-0.51</i>	<i>-0.18</i>

<u>MO Load Hub LMP</u>		Business As Usual	Limited Growth	High Growth	Generation Shift	Public Policy
Without Grain Belt	On Peak Average	41.18	35.83	66.18	54.10	92.41
Without Grain Belt	Off Peak Average	34.06	28.21	51.31	44.33	82.53
Without Grain Belt	All Hours Average	37.46	31.84	58.39	48.99	87.23
With Grain Belt	On Peak Average	41.10	35.35	66.47	53.41	92.57
With Grain Belt	Off Peak Average	33.86	27.85	51.10	43.92	82.25
With Grain Belt	All Hours Average	37.31	31.42	58.42	48.44	87.16
<i>Change in LMP</i>	<i>On Peak Average</i>	<i>-0.07</i>	<i>-0.48</i>	<i>0.30</i>	<i>-0.69</i>	<i>0.15</i>
<i>Change in LMP</i>	<i>Off Peak Average</i>	<i>-0.21</i>	<i>-0.36</i>	<i>-0.21</i>	<i>-0.41</i>	<i>-0.28</i>
<i>Change in LMP</i>	<i>All Hours Average</i>	<i>-0.14</i>	<i>-0.42</i>	<i>0.03</i>	<i>-0.55</i>	<i>-0.07</i>

Wind Volatility Sensitivity

<u>MO Generation Hub LMP</u>		Business As Usual	Change in LMP
Without Grain Belt	All Hours Average	36.16	
High Wind Volatility	All Hours Average	35.98	-0.17
Med Wind Volatility	All Hours Average	36.00	-0.16
Low Wind Volatility	All Hours Average	35.99	-0.17

<u>MO Load Hub LMP</u>		Business As Usual	Change in LMP
Without Grain Belt	All Hours Average	37.46	
High Wind Volatility	All Hours Average	37.30	-0.16
Med Wind Volatility	All Hours Average	37.31	-0.15
Low Wind Volatility	All Hours Average	37.30	-0.16

**Systemwide emissions (short tons)
in 2022**

		Business As Usual	Limited Growth	High Growth	Generation Shift	Public Policy
Without Grain Belt	CO ₂	1,601,540,578	1,498,806,074	1,717,063,291	1,561,815,245	1,295,415,276
Without Grain Belt	NO _x	1,680,673	1,599,984	1,781,492	1,619,695	1,175,250
Without Grain Belt	SO ₂	1,905,495	1,842,896	1,978,100	1,818,555	1,179,587
With Grain Belt	CO ₂	1,588,558,950	1,486,083,410	1,704,904,268	1,549,463,441	1,275,936,800
With Grain Belt	NO _x	1,668,381	1,586,930	1,772,294	1,609,392	1,153,275
With Grain Belt	SO ₂	1,895,357	1,832,559	1,968,639	1,808,532	1,154,281
<i>Emissions reduction</i>	CO ₂	12,981,628	12,722,664	12,159,022	12,351,804	19,478,476
<i>Emissions reduction</i>	NO _x	12,292	13,054	9,198	10,304	21,975
<i>Emissions reduction</i>	SO ₂	10,138	10,337	9,461	10,023	25,306

Wind Volatility Sensitivity

		Business As Usual	<i>Emissions reduction</i>
Without Grain Belt	CO ₂	1,601,540,578	
High Wind Volatility	CO ₂	1,588,546,756	12,993,822
Med Wind Volatility	CO ₂	1,588,558,950	12,981,628
Low Wind Volatility	CO ₂	1,588,579,146	12,961,432

		Business As Usual	<i>Emissions reduction</i>
Without Grain Belt	NO _x	1,680,673	
High Wind Volatility	NO _x	1,668,032	12,641
Med Wind Volatility	NO _x	1,668,381	12,292
Low Wind Volatility	NO _x	1,668,319	12,355

		Business As Usual	<i>Emissions reduction</i>
Without Grain Belt	SO ₂	1,905,495	
High Wind Volatility	SO ₂	1,895,350	10,145
Med Wind Volatility	SO ₂	1,895,357	10,138
Low Wind Volatility	SO ₂	1,895,350	10,145