

**From:** John Kosovich <kosocasa@gmail.com>  
**Sent:** Tuesday, December 03, 2019 9:51 AM  
**To:** Wallingford-Ingo, Gail  
**Subject:** Additional material for 2019 1041-003 BHE hearing  
**Attachments:** img\_2528\_height\_of\_distribution\_pole.jpg; The Electrifying Factor Affecting Your Property's Value - WSJ.pdf; Power Lines and Property Values – EMFSA.pdf; Cardiac device wearers should limit their exposure to high voltage power lines\_UdeMNNouvelles.pdf

Hello, Ms. Wallingford-Ingo

Hope all is well and you had a nice Thanksgiving. I spoke in opposition to the Black Hills Energy application at the Nov. 26th hearing, and wish to supply additional material for the Commissioners to study. In addition to myself and my family, I'm also representing two of my neighbors who provided me with some of the attached documents - their names are listed below mine. We would like this email and all attachments to be part of the public record case documents if possible.

The first attachment (img\_2528\_height\_of\_distribution\_pole.jpg) shows a typical distribution-line pole in our neighborhood which adjoins the Wildhorse Creek easement in Pueblo West. These existing poles are about 30-ft tall. The proposed transmission line towers will be 60 - 90 feet tall - two-to-three times as tall.

We who own property adjacent to this easement not only DO NOT want a new massive transmission line put through here, but we had hoped that BHE would eventually bury the existing distribution lines, as is typical in Pueblo West south of Highway 50.

The other attachments are articles about property values and power lines, and about the health risk of cardiac patients near powerlines. At the hearing, I think BHE mentioned that studies show that property values are not affected by powerlines. We found several online articles agreeing with their position, but all of those were written or funded by energy companies. Many other online articles state that property values fall when the property is near powerlines. These latter articles were mostly written or funded by real estate companies. This begs the question: who would know more about property values - energy companies, or real estate companies?

My neighbor David talked to several local real estate agents, and each one agreed that property values do fall when near powerlines. At least one of those agents agreed we could quote him if the Commissioners need official testimony.

If you have any questions, feel free to contact me (John). Thanks very much.

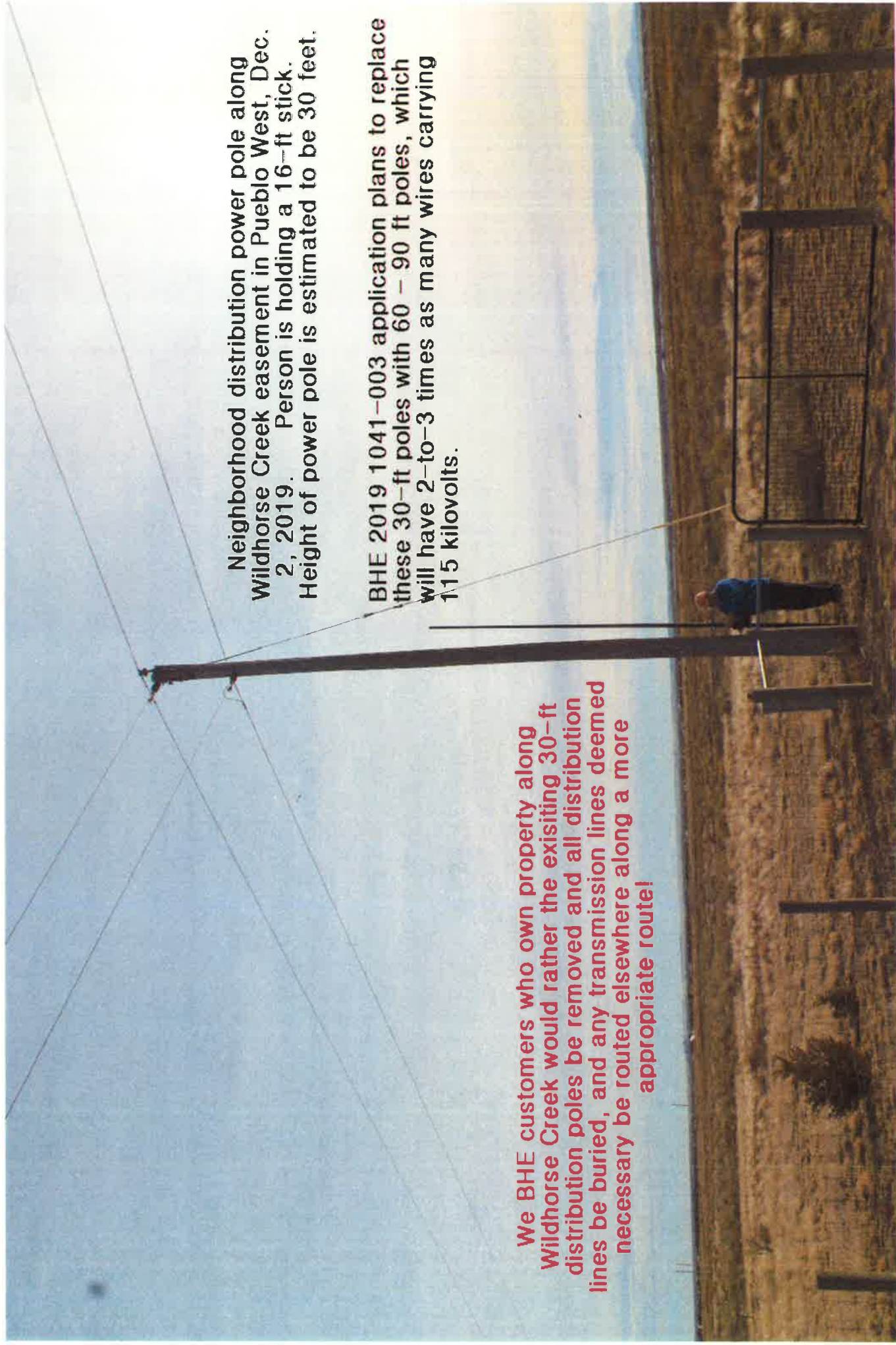
>> John Kosovich  
270 E. Parkridge Dr., Pueblo West

David and Janis Kaweck  
284 E. Parkridge Dr., Pueblo West

We BHE customers who own property along Wildhorse Creek would rather the existing 30-ft distribution poles be removed and all distribution lines be buried, and any transmission lines deemed necessary be routed elsewhere along a more appropriate route!

Neighborhood distribution power pole along Wildhorse Creek easement in Pueblo West, Dec. 2, 2019. Person is holding a 16-ft stick. Height of power pole is estimated to be 30 feet.

BHE 2019 1041-003 application plans to replace these 30-ft poles with 60 - 90 ft poles, which will have 2-to-3 times as many wires carrying 115 kilovolts.



## REAL ESTATE

# The Electrifying Factor Affecting Your Property's Value

Vacant lots adjacent to power lines sell for significantly less than equivalent property further away as homeowners shy away from unattractive views

*By Adam Bonislowski*

Aug. 15, 2018 10:31 am ET

Research has shown that property next to power lines comes at a discount. Just how much of a discount, though, is a little shocking.

A recent study in the Journal of Real Estate Research by College of Charleston assistant professors Chris Mothorpe and David Wyman, finds that vacant lots adjacent to high-voltage transmission lines sell for 45% less than equivalent lots not located near transmission lines. Non-adjacent lots still located within 1,000 feet of transmission lines sell at a discount of 18%.

TO READ THE FULL STORY

SUBSCRIBE

SIGN IN

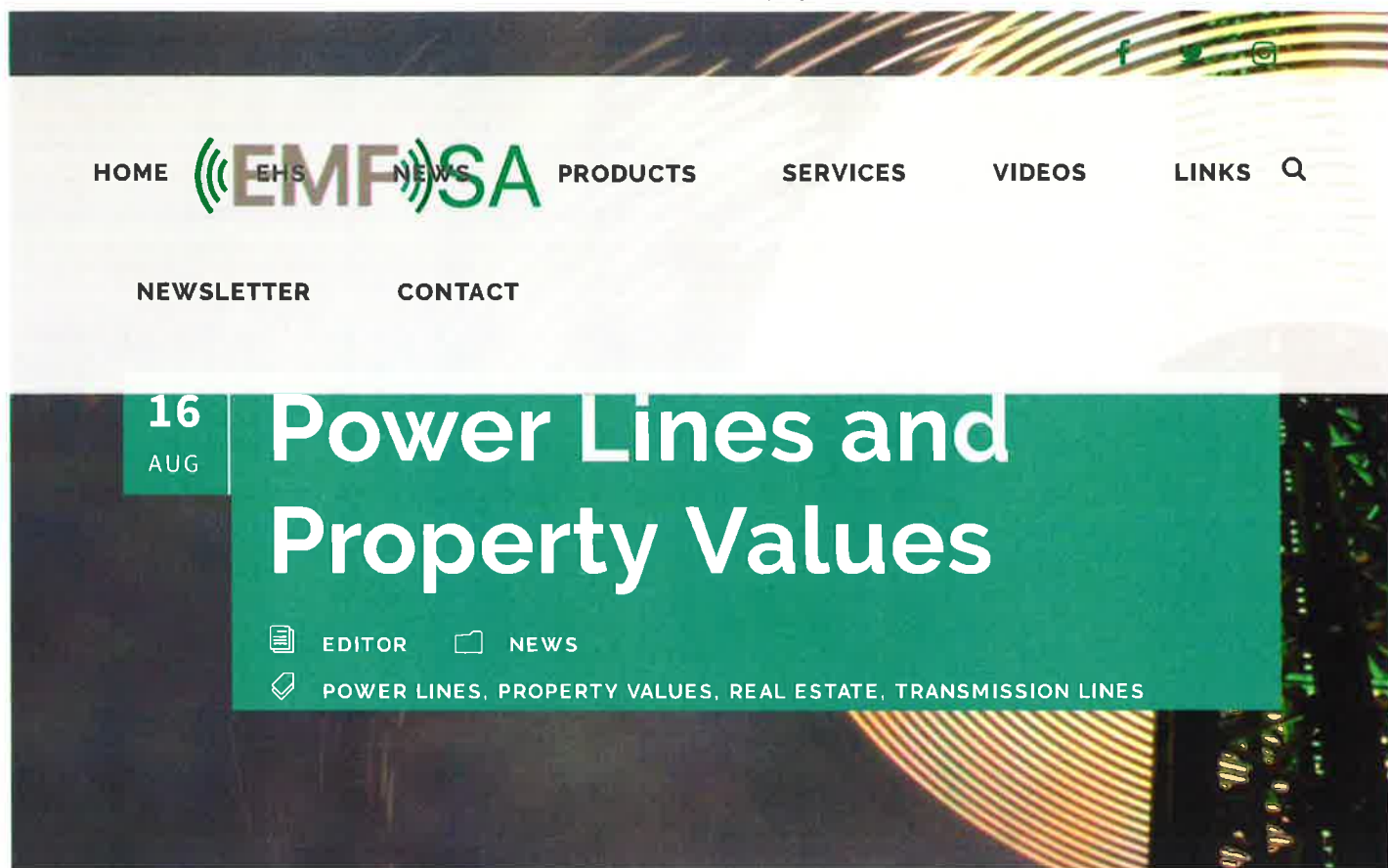
THE WALL STREET JOURNAL.

Continue reading your article with a WSJ  
membership.

Cyber Monday Sale

\$1 for 2 Months

VIEW MEMBERSHIP OPTIONS



An article in the Wall Street Journal (Aug. 15, 2018) points to a recent study in the Journal of Real Estate Research:

1. Vacant lots adjacent to high-voltage transmission lines sell for 45% less than equivalent lots not located near transmission lines.
2. Non-adjacent lots still located within 1,000 feet of transmission lines sell at a discount of 18%.
3. Assuming a market where land represents 20% of a home's overall value, the 45% decrease translates to a drop in total property value of around 9%.

These results were obtained from a recent study in the Journal of Real Estate Research by College of Charleston assistant professors Chris Mothorpe and David Wyman.

According to Prof. Mothorpe the three main factors that influence the lower price :

1. Health concerns associated with proximity to high-voltage lines (though, as the authors note, researchers have not established solid links between proximity to power lines and health issues)

#### ARCHIVES

- > December 2019
- > November 2019
- > October 2019
- > September 2019
- > August 2019
- > July 2019
- > June 2019
- > May 2019

2. The unattractive views

> April 2019

3. The humming sound they produce ( for properties very close to the lines)

> March 2019

Link to the article:

> February 2019

<https://www.wsj.com/articles/the-electrifying-factor-affecting-your-property-value-1534343506>

> January 2019

Study published in the Journal of Real Estate Research:

> December 2018

## The Pricing of Power Lines: A Geospatial Approach to Measuring Residential Property Values

> November 2018

> October 2018

The valuation of power lines is a complex phenomenon. Using a sample of 5,455 vacant lots sold in Pickens County, South Carolina, we uncover substantive pricing discounts of 44.9% for properties adjacent to power lines, and a pricing discount of 17.9% for non-adjacent vacant properties up to 1,000 feet away from the power lines. Applying four different geospatial approaches—buffer zones, straight line distance, viewshed analysis, and tower visibility—we find that high-voltage transmission line (HVTL) pricing models should account for both proximity and visibility to reflect location-specific variations in pricing. <http://aresjournals.org/doi/abs/10.5555/0896-5803.40.1.121?code=ares-site>

> September 2018

> August 2018

> July 2018

> June 2018

> May 2018

> April 2018

© 2018 The American Real Estate Society

> March 2018



> February 2018

> January 2018

> December 2017

> November 2017

> October 2017



## Cardiac device wearers should limit their exposure to high voltage power lines

[UdeMNouvelles](#)

06/23/2015

IN 5 SECONDS  
IN 5 SECONDS

New study shows that electromagnetic interference from high voltage lines can interfere with the proper working of cardiac devices.



Cardiac device wearers to limit their exposure to high voltage power lines, says Dr. Katia Dyrda of Montreal Heart Institute and University of Montreal, who presented her study today at the EHRA EUROPACE -- CARDIOSTIM 2015 conference. Her research into electromagnetic interference (EMI) was conducted in response to public concerns about bicycle routes and walking paths under high voltage power lines (230 kV and more) and whether these are safe for patients with cardiac devices. These high electric fields are also encountered in utility substations where employees who bring up power lines, conduct maintenance or work within the buildings (cleaners, for example) may be exposed.

“High electric fields may interfere with the normal functioning of cardiac devices, leading to the withholding of appropriate therapy (anti-bradycardia pacing, for example) or to the delivery of inappropriate shocks. The International Organization for Standardization says pacemakers and ICDs should give resistance up to 5.4 kV/m (for 60 Hz electric fields) but electric fields can reach 8.5 kV/m under high voltage power lines and 15 kV/m in utility substations,” Dr. Dyrda said, noting that “there is a lot of interest in using the areas under power lines as bicycle paths or hiking trails because it's essentially free space. But patients and the medical community want to understand the risks. There are no recommendations from device manufacturers about power lines or higher electric fields.”

The study exposed 40 cardiac devices (21 pacemakers and 19 ICDs) from five manufacturers to electric fields up to 20 kV/m in a high voltage laboratory. The devices were mounted in a saline tank at human torso height. Devices were set up as both left and right sided pectoral implants. The researchers found that when pacemakers were programmed to nominal parameters and in bipolar mode they were immune to EMI up to 8.6 kV/m. But when programmed to higher sensitivity levels or in unipolar mode, the EMI threshold decreased to as low as 1.5 kV/m in some devices. When programmed to nominal parameters, all ICDs were immune to EMI up to 2.9 kV/m. There was no difference in EMI thresholds between left and right sided implants.

“There is no significant concern for patients with pacemakers programmed in the usual configuration (nominal settings, in bipolar mode). For the minority of patients with devices in unipolar mode or with very sensitive settings, counselling should be given at implantation or at medical follow-up,” Dyrda explained. “There is no need for patients with a pacemaker or ICD to avoid crossing under high voltage power lines (> 230 kV) but patients should avoid staying in a stationary position underneath them. Passing near pylons rather than between two pylons mitigates exposure to the electric field because the wires sag in the middle and the field is higher at this location.”

Dyrda emphasised that this advice does not concern distribution lines (lines delivering electricity to homes), as the 60 Hz electric field that they generate is very low, adding that “Patients ask us if they should avoid driving on roads that cross under high voltage power lines. The answer is no. If you're in a vehicle you are always protected because your car acts as a Faraday cage and shields you automatically.”

Employees with a pacemaker or defibrillator should tell their employer so that their safety at work can be carefully evaluated, Dyrda urged. “Our study tested the effect of electric fields up to 20 kV/m and the results can be used to assess individual risks depending on exposure levels during specific tasks and the type and model of cardiac device. This may lead to job adjustments or, more rarely, to a job change.”

**Source:**

**Adapted from materials provided by the European Society of Cardiology Press Office**

**Notes:**

Dr. Katia Dyrda is affiliated with the University of Montreal's Department of Medicine and the Montreal Heart Institute. She will present the abstract

'Interference resistance of pacemakers and defibrillators to 60 Hz electric fields'

during Poster session 5: Devices (Pacing) on 23 June at 08:30.

The University of Montreal is officially known as Université de Montréal.

**Interview Requests**ESC Press Office

+33-062-884-3113

**About EHRA EUROPACE -- CARDIOSTIM**

EHRA EUROPACE -- CARDIOSTIM is an established, international conference attracting key opinion leaders, well-recognised scientists, physicians, allied professionals and industry.

**About the European Heart Rhythm Association (EHRA)**

The European Society of Cardiology (ESC) represents more than 80 000 cardiology professionals across Europe and the Mediterranean. Its mission is to reduce the burden of cardiovascular disease in Europe. The European Heart Rhythm Association (EHRA) is a registered branch of the ESC. Its aim is to improve the quality of life of the European population by reducing the impact of cardiac arrhythmias and reduce sudden cardiac death.

**Information for journalists attending EHRA EUROPACE -- CARDIOSTIM 2015**

EHRA EUROPACE -- CARDIOSTIM 2015 will be held 21 to 24 June in Milan, Italy at the MiCo Milano Congress.

The full scientific programme is available.