

Summer 2016

Public Perceptions of Urban Infrastructure: Addressing "Wire Blight" to "Go Green"

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About the College of Public Affairs and Community Service

The College of Public Affairs and Community Service (CPACS) was created in 1973 to ensure that the university was responsive to the critical social needs of our community and state. The College was given the mission not only to provide educational programs of the highest caliber to prepare students for leadership in public service, but also to reach out to the community to help solve public problems.

The College has become a national leader among similar colleges, with nine programs ranked in the top 25 in the nation. Our faculty ranks are among the finest in their disciplines. Faculty, staff, and students are integral to the community and state because of our applied research, service learning, and community partnerships. We take our duty seriously to help address social needs and craft solutions to local, state, and national problems. For more information, visit our website: cpacs.unomaha.edu

CPACS Urban Research Awards

Part of the mission of the College of Public Affairs and Community Service (CPACS) is to conduct research, especially as it relates to concerns of our local and statewide constituencies. CPACS has always had an urban mission, and one way that mission is served is to perform applied research relevant to urban society in general, and the Omaha metropolitan area and other Nebraska urban communities in particular. Beginning in 2014, the CPACS Dean provided funding for projects with high relevance to current urban issues, with the potential to apply the findings to practice in Nebraska, Iowa and beyond.



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Daniel Wuebben

Assistant Professor, Goodrich Scholarship Program
University of Nebraska at Omaha

Summer 2016

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Omaha



ARTICLE

<https://www.sciencedirect.com/science/article/pii/S221462961730169X>

VIDEO

<https://vimeo.com/176371484>





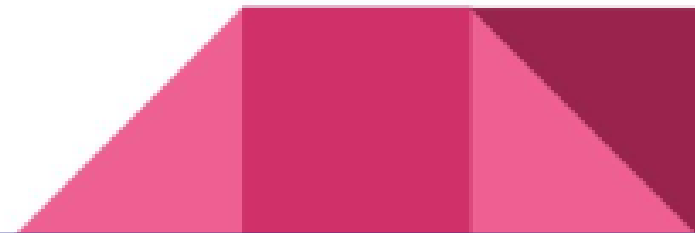
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Sustainability requires (more) wires

- ASCE, "Infrastructure Report Card," D+ for Energy
- Dept. of Energy: \$900 billion to overhaul infrastructure by 2030
- New lines to address vulnerabilities to unpredictable weather and cyberattacks
- Superconductive materials can lower transmission losses and connect regions
- A large-scale network of super high-voltage renewable transmission lines could reduce carbon emissions by 80% from 1990 levels.[ii]



Public Opposition

-Resistance is rooted in concerns about health, property values, safety, costs, accountability, process, and aesthetics

-“NIBMYism” is real, but label is often applied without distinction

-Pylons are symbols of governmental control, cooperate interest, industrial pollution, and the possibility of sudden social collapse.

-Widespread opposition- Auxiliary information about renewable grid development can lessen public resistance, but 34% will “definitely not accept [a new transmission line] without opposition.”[iii]



Professor Morse's Great Historical Picture.

“Electricity” ↔ “Landscape”



YANKEE DOODLE expressed himself much pleased with the unity of design displayed in this great national historical work of art.

Electrification, the “Greatest Engineering Achievement” of 20th Century, looks like blight

Power Over People, Louise B. Young, 1973

Power-Line: The First Battle in America's Energy War, Barry Casper and Paul Wellstone, 1981

The Great Power-Line Cover-Up, Paul Brodner, 1993

The Grid: The Fraying Wires Between Americans and Our Energy Future, Gretchen Bakke, 2016

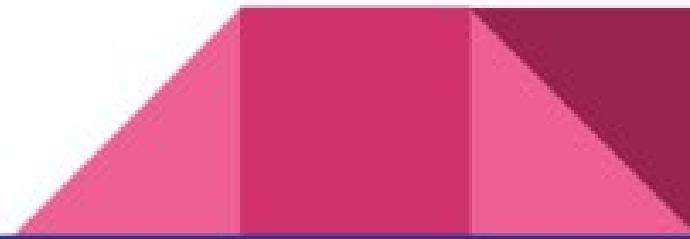
O.H.M.S. (1980)

<https://youtu.be/8rNqBJ9pNU0>



“From Wire Evil to Power Line Poetics: The Ethics and Aesthetics of Renewable Transmission”

<https://vimeo.com/176371484>

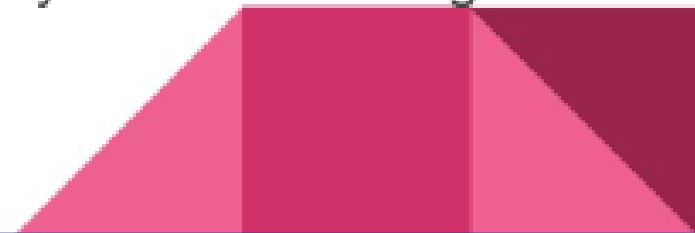


Arboretum, 1980s to Today



Goals of Qualtrics Survey

- 1) Gauge beliefs about the overall environmental quality of Omaha (including its overhead infrastructure) and the visual salience of transmission and distribution lines (i.e. How often and accurately do individuals notice them)
- 2) Measure participants' feelings about what actions should be taken with regard to transmission and distribution lines and acceptance of a hypothetical grid expansion.
- 3) Gather general observations about the utility and identify individuals willing to give formal follow up interviews.



On a scale of 0-10, rate quality of where you live based upon

	Mean
Architecture	6.06
Noise from industry, construction, or traffic	6.18
Access to parks, trails, or green space	6.69
Air quality	6.95
Maintenance of roads and sidewalks	5.48
Landscape	6.46



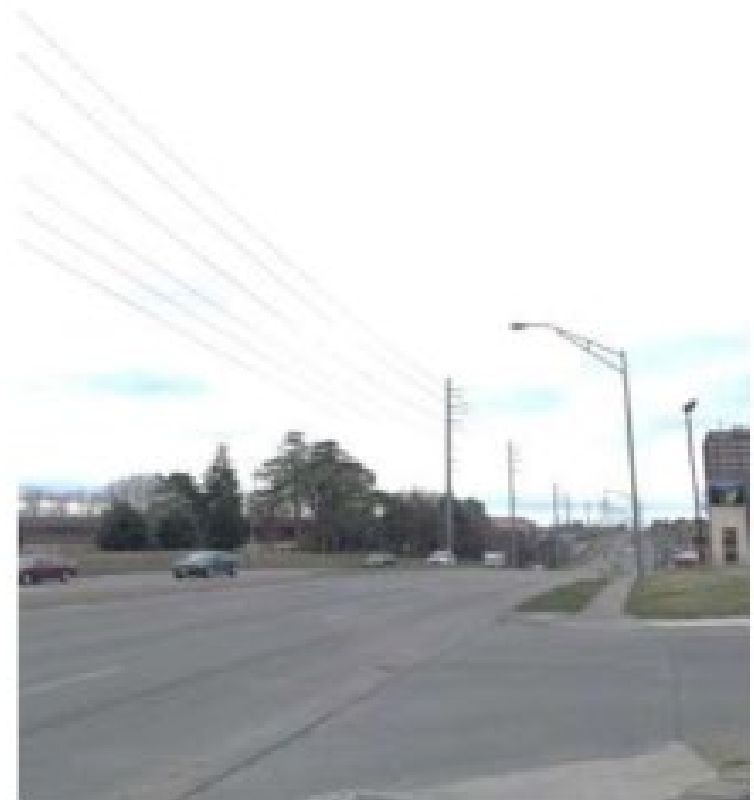
In general, which of the following four reactions should your neighbors adopt in response to overhead transmission and distribution lines?

Answer	%
We should tolerate the existing and any new overhead lines as they are necessary for maintaining electricity, phone, and Internet service.	37%
We should embrace the existing and any new overhead lines as they are symbolic of our society's ability to reliably transmit electricity and keep us all connected	5%
We should try our best to ignore the existing and any new lines and not to complain about them	13%
We should come together to remove or bury the existing and any new overhead lines as they are dangerous eyesores that can do damage to our property values, health, and aesthetic environment	45%



How do you feel about the location of power lines with regard to your daily activities?

Answer	%
They are an eyesore	40.51%
They are health hazards	15.19%
They don't bother me	50.63%
They are too close to where I live	17.72%
I hate them	12.66%
I worry about them falling on me	10.13%



Hypothetical expansion

Please imagine that your local government announced a large program of local infrastructure investments, contributing to the enhancement of the power grid in the whole of the United States. As part of this program, during the next year, a high-voltage power line with standard pylons would be built in your neighborhood. **This power lines (including poles and/or towers) would be up to 198-feet high, and be built at a distance of at least 800 feet from your home. How do you think YOU would react to the announcement of this power infrastructure program?**



Answer	Omaha	EU
Definitely not accept without opposition	32%	34%
Probably not accept without opposition	43%	
Probably accept without opposition	23%	
Definitely accept without opposition	2%	



Chino Hills, California. 198-foot 500kv line. In 2014, utility was force to bury it underground

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