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“Generating Infrastructural Invisibility: Insulation, Interconnection, and Avian Excrement in the Southern California Power Grid”

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doi:10.1215/22011919-3615916.

The fact that industrial infrastructures are embedded in complex environments animated by unexpected agencies is often invisible to their users—at least those who live in rich, industrialized societies with reliable systems for distributing water, power, and other goods and services. This article investigates how that invisibility is generated through a case study of electric power transmission in California in the early twentieth century. In the 1910s, the Pacific Light and Power Company constructed a 150,000-volt transmission line that delivered power from the Big Creek hydroelectric complex in the Sierra Nevada to customers in Los Angeles, more than 240 miles (386 kilometers) away. When the Southern California Edison Company upgraded this line to 220,000 volts in the early 1920s, the rate of disruptive “flashovers” on the line jumped dramatically. After months of investigation, the cause was determined to be excrement from birds perching on the transmission towers. To render this and other sources of interruption invisible to users, two techniques were used: insulation and interconnection. These kinds of humble techniques of separation and resilience are ubiquitous in modern infrastructure. By creating and maintaining divisions, they make it possible for new kinds of agency to emerge. Infrastructures become animate: responsive to their environments in ways that allow them to persist in the face of continual change. (Text from author’s abstract)

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