

**FOR PUBLICATION**  
**UNITED STATES COURT OF APPEALS**  
**FOR THE NINTH CIRCUIT**

UNITED STATES OF AMERICA,  
*Plaintiff-Appellee,*

v.

87.98 ACRES OF LAND MORE OR  
LESS IN THE COUNTY OF MERCED;  
CALIFORNIA DEPARTMENT OF FISH &  
GAME; KAREN ADAMS,

*Defendants,*

and

DONN RAYMOND CAMPION,  
*Defendant-Appellant.*

No. 06-15410  
D.C. No.  
CV-03-06064-AWI/  
LJO  
OPINION

Appeal from the United States District Court  
for the Eastern District of California  
Anthony W. Ishii, District Judge, Presiding

Argued and Submitted  
February 14, 2008—San Francisco, California

Filed June 24, 2008

Before: William C. Canby, Jr. and Milan D. Smith, Jr.,  
Circuit Judges, and Stephen G. Larson,\* District Judge.

Opinion by Judge Canby

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\*The Honorable Stephen G. Larson, United States District Judge for the Central District of California, sitting by designation.

**COUNSEL**

John Derrick, Santa Barbara, California, for the defendant-appellant.

Leslie B. Bellas (brief), Mary Gabrielle Sprague (argument), United States Department of Justice, Environment & Natural Resources Division, Washington, D.C., for the plaintiff-appellee.

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**OPINION**

CANBY, Circuit Judge:

In this case, we review a district judge's discretion to exclude expert testimony regarding electromagnetic fields ("EMFs") in a condemnation action. The United States condemned an easement on land belonging to Donn Campion for the construction of power transmission lines. At trial, both sides offered expert testimony regarding diminution of value of the remaining land resulting from the power lines within the easement. While some of this testimony was allowed, the judge refused to let Campion's expert, an environmental planner, testify about specific EMF levels on the land and the types of questions developers typically ask her about EMFs. A jury found that Campion was entitled to just compensation in the amount of \$2,023,715. The district court entered judgment, and Campion appeals the exclusion of expert testimony. We affirm.

**FACTUAL BACKGROUND**

Campion owns 3,220 acres of land in Merced County, California. Acting on behalf of the Department of Energy and the Western Area Power Administration, the United States filed an eminent domain action to acquire a right of way easement

across the land for a 500kV power transmission line called the Path 15 line. The Path 15 line was constructed and is now operational. It rests on a 200-foot-wide easement running for approximately three miles across Campion's land and covering 87.98 acres. The line is supported by 13 steel towers ranging in height from 130 to 190 feet, and branching out 40 feet on two sides.

Like other live power lines and electrical devices, the Path 15 line generates EMFs that radiate out from the line. There was testimony that the Path 15 line sometimes emits crackling and buzzing sounds. While there is no scientific evidence that EMFs from power lines like the Path 15 line cause adverse health effects in nearby residents, there is a generally acknowledged public perception that EMFs cause health problems.

At the time that the easement was taken, Campion's land was undeveloped and used for agricultural purposes. The land had been zoned for agricultural use, with a minimum parcel size of 160 acres. The government's expert appraiser, Correia, testified that, at the time of the taking, the highest and best use of the property was for agricultural purposes. On that basis, he valued Campion's entire property at \$3.075 million. He further testified that the taking caused no diminution of the value of the land outside the easement. Accordingly, he testified that the government should pay \$76,518 as just compensation for the taking of the easement, and only the easement.

Before the taking occurred, however, Campion had begun creating plans to develop part of the land for residential use, a golf course, a community village center, and public facilities. His expert appraiser, Gimmy, testified that the highest and best use of the land at the time of the taking was for such a residential development. On this assumption, Gimmy put the pre-taking value of the land at \$19.320 million. Gimmy also concluded that the power transmission lines diminished the value of the land outside of the easement. Barred from tes-

tifying that the mere existence of EMFs on Campion's land reduced the land's value, Gimmy cited public perceptions of power lines, environmental issues limiting development in other areas of the property, aesthetic issues, and the practicalities of developing around power lines. He concluded that, after the taking, the property would have no residential potential. Rather, cattle grazing would be the highest and best use of the entire property after the taking. He concluded that the value of the property after the taking was \$3.22 million, warranting a \$16.1 million compensation award. Of this amount, only \$1.415 million was attributable to the easement itself as opposed to severance damages.

Gimmy's opinion was influenced by the report of another of Campion's experts, Cindy Sage, an environmental planner with extensive experience advising developers regarding the impact of EMFs from power transmission lines on the use and development of property. Sage proposed to testify to the following: (1) public perceptions of the effects of EMFs among residential homeowners and home buyers, (2) the extent and level of EMFs from the Path 15 line that reach beyond the easement into the rest of Campion's property, and (3) the types of studies concerning EMFs for which developers routinely engage her. Of these subjects, the trial judge permitted Sage to testify only to public perceptions. In this appeal, Campion challenges the exclusion of the latter two subjects.

## DISCUSSION

Because Sage was not an expert appraiser and there had been no showing that her EMF measurements were reliable, the district judge excluded her testimony except to the extent that Gimmy relied upon it in reaching his conclusion. The district court also ruled—and Campion does not dispute on appeal—that there could be no evidence at trial that EMFs cause actual health problems in nearby residents.<sup>1</sup> On this

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<sup>1</sup>This ruling accords with widespread authority holding that such evidence is not scientifically reliable. *See, e.g., San Diego Gas & Elec. Co.*

basis, Gimmy was barred from testifying that the mere existence of EMFs on Campion's land reduced the land's value. Therefore, Sage was allowed to testify only regarding public perceptions of EMFs.

The judge excluded Sage's testimony regarding EMF levels as prejudicial, reasoning that testimony about specific EMF levels on Campion's land (including a map that outlined a "zone of impairment") might tend to prejudice a jury inclined to believe that EMFs do, in fact, cause health problems in nearby residents. The judge excluded Sage's testimony regarding the EMF studies she would perform for developers for similar reasons. Because the trial judge acted within his discretion in excluding the evidence, we affirm.

### ***I. Standard of Review***

A trial court's decision to exclude expert testimony as irrelevant, *see* Fed. R. Evid. 402, or unfairly prejudicial, *see* Fed. R. Evid. 403, in a Fifth Amendment action for just compensation is reviewed for abuse of discretion. *See United States v. 33.5 Acres of Land*, 789 F.2d 1396, 1400 (9th Cir. 1986); *United States v. Ravel*, 930 F.2d 721, 726 (9th Cir. 1991). When it is not clear whether relevance or unfair prejudice formed the basis for the district judge's ruling, if the proffered testimony could be excluded under either rule, we must affirm. *United States v. Morales*, 108 F.3d 1031, 1035 (9th Cir. 1997).

### ***II. Severance Damages in Power Line Condemnation Proceedings***

[1] When the government condemns part of a parcel from an owner, it is liable not only for the part taken but also for

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*v. Daley*, 253 Cal. Rptr. 144, 150-53 (Cal. Ct. App. 1988), *disapproved of on other grounds by L.A. County M.T.A. v. Cont'l Dev. Corp.*, 941 P.2d 809 (Cal. 1997).

the diminution of value in the remainder resulting from the severance. See *United States v. 4.0 Acres of Land*, 175 F.3d 1133, 1139 (9th Cir. 1999). The excluded evidence bears on the effect of the power lines on market value outside of the boundaries of the easement. Campion, as the landowner in this case, bears the burden of proving his entitlement to these “severance damages.” *United States ex rel. Tenn. Valley Auth. v. Powelson*, 319 U.S. 266, 273 (1943). As the proponent of Sage’s expert testimony, Campion also has the burden to establish its admissibility. *Lust v. Merrell Dow Pharm., Inc.*, 89 F.3d 594, 598 (9th Cir. 1996).

[2] Wholly apart from evidence of actual health risks, evidence of public perceptions of health risks—even irrational public perceptions—may properly establish an impact on market value. “[I]f fear of a hazard would affect the price a knowledgeable and prudent buyer would pay to a similarly well-informed seller, diminution in value caused by the fear may be recoverable as part of just compensation.” *United States v. 760.807 Acres of Land*, 731 F.2d 1443, 1447 (9th Cir. 1984) (citations omitted). A party may therefore introduce evidence to show how public fears of EMFs, even if they are unreasonable, adversely affect value. See *id.*; *San Diego Gas & Elec. Co.*, 253 Cal. Rptr. at 150-53 (gathering cases). Thus, the admissibility of Campion’s EMF evidence hinges on this latter factor—the extent to which EMFs bear on public perceptions in the marketplace.

### ***III. Evidence of EMF Levels and Locations***

In the district court, Campion’s offer of proof showed that Sage was willing to give expert testimony regarding the levels and locations of EMFs resulting from the construction and operation of the power line. Specifically, Sage proposed to testify that certain levels of EMFs extended beyond the physical boundaries of the easement into the remainder of Campion’s land. Both parties seem to agree that the Path 15 lines would generate EMFs on Campion’s land beyond the area of

the easement, and two witnesses testified to that effect.<sup>2</sup> Campion challenges only the exclusion of more detailed information about the specific levels of EMFs on the land.

Federal Rule of Evidence 702 provides that a court may admit testimony from a qualified expert if it will help the trier of fact understand the evidence or determine a fact in issue. Such evidence must still be relevant; “[e]xpert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 591 (1993) (internal quotation marks and citation omitted). Such testimony must be shown to be either scientifically reliable, *id.* at 592-95, or otherwise reasonably reliable. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 158 (1999). Campion contends that there is no dispute as to the reliability of Sage’s measurements, despite comments by the district judge suggesting that the evidence could not be admitted as freestanding expert testimony because there had been no reliability showing under *Daubert* or *Kumho Tire*. Even if Sage’s testimony was not demonstrated to be reliable, it might still be admissible under Federal Rule of Evidence 703, which provides that otherwise inadmissible evidence may yet be admissible as the basis for an expert’s opinion if its “probative value in assisting the jury to evaluate the expert’s opinion substantially outweighs [its] prejudicial effect.” If the evidence is admissible of its own accord—and not merely as background for other expert testimony—then it is subject to the standard prejudice test of Rule 403, excludable only if its probative value is substantially outweighed by its unfairly prejudicial effect. We need not decide whether Rule 403 or Rule 703 governs in this case because we conclude that exclusion of the evidence was not an abuse of discretion under either rule.

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<sup>2</sup>Witness Boyko testified without objection that the EMFs extended beyond the right of way. Gimmy also mentioned how EMFs extended beyond the right of way, subject to a limiting instruction that his testimony should be considered only insofar as it bears on the question of public perception and how public perception affects land value.

### A. Probative Value

Circuit precedent provides meaningful guidance on the probative value of the measurements in question. In *706.807 Acres*, the government condemned a safety buffer zone for loading explosives on a shore. 731 F.2d at 1445. The landowner introduced expert testimony suggesting that severance damages were appropriate because the buffer zone did not provide adequate protection for the rest of his land. *Id.* at 1448-49. In reaching his conclusion, this expert relied upon the opinion of another expert as to what was actually “safe.” *Id.*

This evidence was admitted but the jury rejected it and found no severance damages. When the landowner challenged the verdict on appeal, the court held that the landowner failed even to make out a prima facie case for severance damages because there was no testimony connecting the safety issue to the real estate market. *Id.* Rather than relying on an expert’s perception of a safety risk, the landowner should have introduced evidence showing public perceptions of a safety risk. *Id.* Scientific evaluations of conditions on the property must bear on market effects to be admissible. If the expert based his opinion on nonpublic information and there was no showing of what the public considered a safe buffer zone, the opinion could not support a verdict for the plaintiff. While the ultimate issue in that case was the sufficiency—rather than the exclusion—of evidence, the court’s holding did not deal in shades of sufficiency, stating that “[t]here is . . . no demonstrated causal link between the taking of the [buffer zone] and the severance damage of which the Trustees complain.” *Id.* at 1449.

[3] We conclude that this example governs our case. The trial judge here required all EMF evidence to bear on public perceptions and their market effect. This requirement was no surprise to *Campion*: it was reiterated in a series of hearings before and during trial that if *Campion* wished to introduce



evidence of EMF levels, he would have to show the connection between those levels and public perceptions. Campion declined the court's repeated invitation, even when given an extended opportunity to make an offer of proof.

[4] Campion argues that he was deprived of a chance to show the jury the premise of his claim—the fact that EMFs do exist on the property. While public perceptions of danger from power lines are, to some extent, predicated on the *existence* of EMFs in a given area, Gimmy's testimony in the record and his report do not suggest that EMF *measurements* are relevant to public perceptions. The jury heard testimony from two witnesses that EMFs existed. In the absence of relevant and probative evidence, a jury could only speculate concerning the effect of a particular measurement on public perception. Perhaps the general public, unschooled in the significance of the milligauss,<sup>3</sup> is afraid of actual EMFs in any quantity, so long as they come from a big power line. Or perhaps the levels of EMFs that exist on Campion's land would even *ease* public fears in the marketplace. *See id.* There is simply no way for a jury to tell. Without any evidence from Gimmy or anyone else that higher levels of EMF generate higher levels of buyer aversion and lower sale prices, Sage's testimony about specific EMF levels has little to no probative value.

## B. Prejudice

[5] Our inquiry next turns to the unfair prejudice that could have resulted had Sage's measurements been introduced. To the extent that Sage's testimony and illustration suggested that

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<sup>3</sup>One thousandth of a gauss; the unit Sage employed in her measurements. The *Oxford English Dictionary* defines "gauss" as follows: "The electromagnetic unit of magnetic induction (flux density) in the [centimetre-gram-second] system, defined as the induction that exerts a force of one dyne on each centimetre of a straight wire carrying one e.m.u. (10 amp.) of current, when the induction is perpendicular to the wire."

certain levels of EMFs would burden or undermine the value of his property, Campion failed to show how the EMF levels in that witness-selected zone had a special influence on public perceptions. There is a corresponding risk that Sage's testimony would mislead or confuse the jury; the testimony would invite inferences about EMF levels that were unsupported—whether they ran to Campion's advantage or not.<sup>4</sup> Given the potentially prejudicial effect of the measurements and Campion's failure to establish their probative value, we hold that their exclusion was not an abuse of discretion.<sup>5</sup>

#### *IV. Studies Commissioned by Developers to Measure EMFs*

The court prohibited Sage from describing the EMF studies that developers had commissioned her to undertake or specific instances where she had advised developers about EMFs. The judge reasoned that “when people hear about number crunching, computer models, . . . et cetera, in order for that to have some relevance, the underlying premise, that is, that EMF causes some danger or harm, would be required.” While this evidence is closely associated with the excluded measure-

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<sup>4</sup>At the hearing on October 28, 2005, the district judge described part of the prejudice concern in a way that accords with his ultimate ruling:

[T]he maps [showing EMF levels on Campion's land] are obviously a concern because I can envision a map where she has these red lines or something like that, which, again, as I've indicated, just really overemphasizes, with no factual basis, that there is this zone—not a zone of fear, but a zone of EMF transmissions, which implicitly cause harm. And that's not what . . . this jury needs to be concerned about.

<sup>5</sup>In evaluating the trial judge's exercise of discretion, we note that the government received parallel treatment with respect to mitigating evidence it offered about EMFs that come from all kinds of electrical devices. The government offered this evidence for purposes of impeachment of Gimmy, and the court ruled that it was unfairly prejudicial under Rule 403 because there had been no showing that home buyers generally take their default EMF exposure from all kinds of electrical devices into account when evaluating the risk of living near power lines.

ments, separate analysis applies because it does not relate to the market's sensitivity to the result of Sage's measurements, but to the market's sensitivity to the *fact* that some buyers seek out Sage's measurements in the first place. Because this evidence held little probative value and any erroneous exclusion of this evidence was harmless to the verdict, we affirm the district court.

#### A. Probative Value

[6] Testimony by Sage regarding her experience with developers would have some probative value to the extent that it reflects the perceptions of developers in general concerning EMFs. When developers exhibit their anxiety by requesting computer models, those requests may illustrate a form of public perception. That perception exists regardless of whether the results of Sage's tests are reliable. Without inferring any causal link between specific measurements and market behaviors, it is possible to infer that developers are concerned because they commission these reports. The judge's objection—that computer modeling implies actual danger and scientific accuracy—poses no obstacle to probative value. Sage's computer models and studies are direct evidence that those public misapprehensions about EMF risk exist, at least in the view of developers.

[7] The probative value of the testimony would have added relatively little, however, to the evidence that *was* presented at trial. *See* Fed. R. Evid. 403 (balancing probative value against “needless presentation of cumulative evidence”). The judge did allow Sage to testify, by way of personal background, to the fact that she advises developers about EMFs generally. This testimony included showing the jury a list of Sage's clients. The district judge forbade her to testify only regarding specific instances where she advised developers and other entities. The judge reasoned that Gimmy did not base his expert testimony on Sage's advice to specific developers. The judge also noted that the impact of Sage's advice on pub-

lic perceptions was unclear without surveys or some other broad indicia of market effects. In light of the fact that the judge did allow Sage to testify that she advised developers generally, the marginal probative value of specific instances of advice is minimized, particularly when there was no tie-in to Gimmy's testimony.

### **B. Unfair Prejudice and Harmless Error**

[8] The danger of confusion or prejudice from this testimony is not as apparent as the danger relating to EMF measurements and impairment zone maps, but it probably exists in some degree because the jury might give it undue effect. The balancing of factors for and against admissibility is close enough so that we cannot say that the district court abused its discretion in excluding this part of Sage's testimony. Even if we were to conclude to the contrary, however, reversal would not be required. A non-constitutional error requires reversal unless there is a "fair assurance of harmlessness, or stated otherwise, unless it is more probable than not that the error did not materially affect the verdict." See *United States v. Seschillie*, 310 F.3d 1208, 1214 (9th Cir. 2002) (internal quotation marks and citation omitted). The perceptions of the developers with whom Sage came into contact were only one segment of the total evidence of public perceptions, and they were even a smaller segment of the overall evidence of diminished value, which included visual, auditory, and other factors. In light of the evidence's limited probative value, and the fact that the jury could infer that developers inquire about EMF levels from other aspects of Sage's testimony, it is more probable than not that the exclusion of testimony on Sage's specific experiences with developers did not materially affect the verdict.

## **CONCLUSION**

The trial judge acted within his discretion in excluding Sage's measurements, as depicted in a map of the "impaired

zone,” on the ground that they could plausibly mislead the jury into thinking that EMFs posed a proven health risk to humans. The countervailing probative value of such measurements is minimal because Campion presented no evidence linking specific EMF levels with specific public perceptions or market effects. With respect to the models Sage constructed for developers, these specific examples offer little probative value in light of the general testimony regarding Sage’s work that was admitted. If there was any error in excluding the latter evidence, the error was harmless. The judgment of the district court is

**AFFIRMED.**