

SavetheOzarks

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Transmission Construction Obstacles

Provided by SPP Transmission Owners (TOs)

**Source: Southwest Power Pool
REGIONAL STATE COMMITTEE
Intercontinental Stephen F. Austin, Austin, TX
January 30, 2012**

American Electric Power	
Obstacle Type	Description of Obstacles Resulting in Increased Costs
Regulatory	Regulatory Certificate of Convenience and Necessity (CCN) Process can result in change of planned transmission path
	Unexpected Regulatory Issues due to state law changes during the construction period (over several years)
	Regulatory process delays (i.e. Commission rulings on CCN's Injunctions for various cause (i.e. legal issues, city mandate, county approval)
Environmental	Discovery of significance during field work (i.e. mammoth skeleton, Indian burial ground)
	Unanticipated environmental testing requirements imposed by state or national authority
	Legal costs associated with regulatory or environmental permitting
Project related	Unexpected cost increases in materials due to basic raw materials commodity index increases, (i.e. steel and aluminum).
	Unexpected cost increases in materials due to other issues, (i.e. earthquake in Japan, fire at insulator plants)
	Increase in estimated Contract Labor costs due to increased demand and reduced supply
	Increase in estimated Contract Labor costs due to field conditions encountered being worse than estimated, (i.e. more subsurface rock than anticipated, weather delays, etc.)

	Increased competition for limited resources (i.e. contract skilled labor, rare/special components)
	Weather related delays (i.e. tornado destroys portion of project, rain delays beyond planned amount)
	Transportation issues (i.e. late delivery of heavy transformer, overseas shipping of components)
	Technical issues (i.e. change in design required during construction)
	Foreign exchange rates for equipment manufactured in foreign countries artificially increasing material costs
	Labor costs to construct planned facilities
	Right-of-way (land) easement costs
Other	While there are other influences, these make up the majority of the "root causes" for cost escalation. A good rule of thumb (and amazingly consistent) is that line costs are generally split 45% for Material, 45% for construction and ROW, and 10% for Engineering (including environmental permitting, regulatory, design, project management, etc.). With the labor and material being driven primarily by (constantly changing) national and international economic conditions and land pricing being subjective and highly volatile in some areas, it's easy to see where the biggest exposure lies.