

Contractors Perspective on Causes of Delays in Power Transmission Projects

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Abstract : At the very heart of the power system, power transmission (PT) acts as an essential link between power generation and distribution. Timely completion of PT infrastructures is therefore crucial to support the development of power system as a whole. Yet despite the importance, studies on PT infrastructure development projects are embryonic and, hence, PT projects undergoing widespread delays worldwide. These delay factors are idiosyncratic and identifying the critical delay factors is essential if the PT industry professionals are to complete their projects efficiently and within the expected timeframes. This study identifies and categorizes 46 causes of PT project delay under ten major groups using six sector expert's recommendations studied by a preliminary questionnaire survey. Based on the experts' strong recommendations, two new groups are introduced in the final questionnaire survey: sector specific factors (SSF) and general factors (GF). SSF pertain to delay factors applicable only to the PT projects, while GF represents less biased samples with shared responsibilities of all project parties involved in a project. The study then uses 112 data samples from the contractors to rank the delay factors using relative importance index (RII). The results reveal that SSF, GF and external factors are the most critical groups, while the highest ranked delay factors include the right of way (RoW) problems of transmission lines (TL), delay in payments, frequent changes in TL routes, poor communication and coordination among the project parties and accessibility to TL tower locations. Finally, recommendations are made to minimize the identified delay. The findings are expected to be of substantial benefit to professionals in minimizing time overrun in PT projects implementation, as well as power generation, power distribution, and non-power linear construction projects worldwide.

Keywords : delay, project delay, power transmission projects, time-overruns

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