Factors causing design schedule delays in turnkey projects in Taiwan

an empirical study of power distribution substation projects

ABSTRACT

Because of its benefits, the turnkey project delivery method has received much global attention; however, turnkey contractors often have difficulty completing projects within the contract schedule. Through case studies, expert interviews, questionnaire surveys, and statistical data analysis, this study revealed that, of 27 delay factors that affect design schedules in power distribution substation projects, the most common delay factors are "public contending or political involvement" and "tedious review processes of government agencies." Furthermore, the study proposes assorted strategies from the perspectives of the owner, turnkey contractor, and designer that can be used to help prevent delays in similar turnkey projects.

KEYWORDS: turnkey project; public-private partnership; planning and design; schedule delay; power distribution substation

https://www.pmi.org/learning/library/design-schedule-delays-turnkey-projects-5439

Fossil power plant schedule compression tactics

lessons from independent power producers

By O'Connor, James Thomas | Norwich, W. T. | In this age of increasing demand for electricity and increasing competition from individual power producers, compressed schedule techniques provides a solution to the need for new generating capacity

Overall construction project performance of fossil power plants can be substantially improved by focusing on methods of schedule compression. Accordingly, the primary objective of this study was to identify and document proven, effective practices for shortening fossil power plant schedules, with emphasis on those successful tactics exercised by independent power producers (IPPs).

https://www.pmi.org/learning/library/schedule-compression-tactics-reduce-duration-5630

CPM scheduling and its use in today's construction industry

Article Scheduling, Construction March 1998

Project Management Journal

Baki, M. A.

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In today's world of computers, advanced technology and complex business relationships, scheduling and management of construction projects has assumed a greater degree of importance. The majority of contractors, owners, and design consultants are recognizing that implementing a comprehensive scheduling and cost control program, geared to their needs, is essential for profitability.

To keep pace with this trend, CPM (Critical Path Method) scheduling is used and accepted on many major projects to plan and coordinate work. CPM works most successfully when the entire organization, from the owner and the general contractor to the subcontractors and suppliers, are involved in the input of information.

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https://www.pmi.org/learning/library/critical-path-method-scheduling-construction-industry-2069

Managing large construction projects

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PM Network

Foti, Ross

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Foti, R. (2001). Managing large construction projects. PM Network, 15(8), 24–31.

For most in construction management, "large" is a highly subjective term.

It means biggest project personally experienced until now. When looking at "large" through the triple-constraint triangle, the word can be defined in terms of scope (quality), resources (people) and time. Large construction projects are generally high-visibility, public sector works, like stadiums, capital improvement projects and transportation corridors. They often last longer than one year, require cooperation between hundreds of stakeholders and cost more than \$50 million to complete.

Large can translate into intimidating, uncontrollable or even excessive, but project management principles relating to communication, time management, quality and human resources can transform overwhelming tasks into successful deliverables.

Communication Considerations

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https://www.pmi.org/learning/library/managing-large-construction-projects-4876

Effects of management on productivity in construction

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Article Organizational Project Management, Construction December 1980

Project Management Quarterly

Hohns, H. Murray

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Hohns, H. M. (1980). Effects of management on productivity in construction. *Project Management Quarterly, 11*(4), 29–30. <u>Reprints and Permissions</u>

Wagner, Hohns, Inglis, Inc.

Introduction – Purpose of Paper

Over the past fifteen years, the author has been vitally interested and concerned on a daily basis with the effects that change and environment have on construction productivity. As an experienced engineer who has spent much time managing major projects and also analyzing and solving construction problems and disputes on more than \$3.5 billion worth of construction, the author has been constantly called upon to assess what influence a change in construction sequence, plans, etc. had or might have had on the otherwise unaffected productivity of construction workers.

Few sources exist that set forth *any* statement of productivity rate change for *any* cause, and there is a severe need to share the knowledge possessed by those whose experiences have provided a base broad enough to quantify the productivity change to be anticipated.

https://www.pmi.org/learning/library/implementing-matrix-management-researchdevelopment-1840