

PPG#15 LIFE-CYCLE COST ANALYSIS, 2ND EDITION

Table of Contents

Introduction to the Second Edition


Introduction to the First Edition

Chapter 01: Life-Cycle Cost Theory

1. *Infrastructure Asset Life Cycle Cost Analysis Issues*, Douglas D. Gransberg, PE CCE FRICS; Eric Scheepbouwer, **AACE International Transactions**, 2010
2. *Feasibility Studies: A Case For Using A Stochastic Approach*, Sabah Alkass, P.Eng.; Saad Al-Jibouri; Vipha Techakosol, **AACE International Transactions**, 2006
3. *Cost Engineering Maturity Model (CEMM)*, H. Lance Stephenson, CCC, **AACE International Transactions**, 2011
4. *Life Cycle Cost Analysis for Transportation Projects*, Robert H. Harbuck, PE CCE CEP, **AACE International Transactions**, 2009
5. *Cost Estimating, Project Performance and Life Cycle*, Kul B. Uppal, PE CEP, **AACE International Transactions**, 2009
6. *Non-Linear and Multivariate Regressions for Space Engineering Parametric Cost Models*, Elisabetta Lamboglia; Paolo Gaudenzi; Herve Journier, **Cost Engineering Journal**, 2008
7. *Project Scoping in a Large Pipeline Company*, Ray S. Philipenko, P.Eng., **AACE International Transactions**, 2009
8. *Cost Engineering Maturity Model (CEMM)*, H. Lance Stephenson, CCC, **AACE International Transactions**, 2011
9. *Cost Savings Achieved Through Changing Processes for Cost Estimating in Building Information Modeling*, Tamera L. McCuen; Carla Lopez del Puerto, CCC, **AACE International Transactions**, 2011
10. *Pitfalls of Early Estimates and Scope of Work*, Kul B. Uppal, PE CEP, **Cost Engineering Journal**, 2011
11. *Disciplined Transition from Projects to Operations*, William Kellow; John O'Keefe Jr.; Greg Swanberg, **AACE International Transactions**, 2005
12. *Prepare a Stress-Free Project Final Report*, Mark T. Chen, PE CCE, **AACE International Transactions**, 2004
13. *Construction Trends and the Cost Engineer*, Talal Abi-Karam, PE CCE, **AACE International Transactions**, 2004
14. *The Total Cost Management (TCM) Framework*, John K. Hollmann; Wesley R. Querns, **Cost Engineering Journal**, 2001
15. *Value Management Assistance in Design-Build*, Stephen J. Kirk, **AACE Document**, 1999
16. *Value Engineering and Total Cost Management*, Farid Fam Mansour, PE, CCE, **AACE Transactions**, 1994
17. *Basic Engineering Economics*, Julian A. Piekarski, CCE, **AACE Transactions**, 1987

Chapter 02: Life-Cycle Cost Calculation Methods

1. *Power Plant Financial Pro Forma Analysis*, Gordon V.Z. Beard, PE CCE, **AACE International Transactions**, 2003
2. *Financial Feasibility in Implementing Process Change*, Clark B. Pace; Mark D. Huppert, **AACE International Transactions**, 1998
3. *Simplified Approach to Probabilistic Cost Benefit Analysis: Architectural Lighting Example*, Khaled Nassar; Abdullah Al-Mohaisen, **Cost Engineering Journal**, 2006
4. *Feasibility Studies: A Case For Using A Stochastic Approach*, Sabah Alkass, P.Eng.; Saad Al-Jibouri; Vipha Techakosol, **AACE International Transactions**, 2006


- 
5. *Estimating Cost Growth From Schedule Changes: A Regression*, John V. Bielecki; Edward D. White, **Cost Engineering Journal**, 2005
 6. *Best Practices in Cost Engineering*, Nick J. Lavingia, PE, **AACE International Transactions**, 2004
 7. *Characterizing Project Performance with Quantified Indices*, Parviz F. Rad, PE CCE; Ginger Levin, **AACE International Transactions**, 2004
 8. *Preliminary Economic Decisions - A Simplified Approach*, Gustavo A. Perez, **Cost Engineering Journal**, 2003
 9. *The Future Net Present Value of Investment Alternatives*, Maarten S.A. Vrijland, **AACE International Transactions**, 2000
 10. *Life Cycle Project Management*, Dr. Douglas D. Gransberg, PE; Michael A. Ellicott, PE, **AACE International Transactions**, 1997
 11. *TCM: Managing Cost Before It Occurs*, Larry G. Medley, Sr., CCC, **AACE Transactions**, 1994
 12. *Simulation Analysis In Project Life Cycle Cost*, He Zhi, **Cost Engineering Journal**, 1993
 13. *A Comprehensive Capital Investment Evaluation System*, Alan J. Stevens, **AACE Transactions**, 1993
 14. *Life Cycle Costing: A Practice Tool?*, Allan Ashworth, **Cost Engineering Journal**, 1989
 15. *Techniques of Life Cycle Costing*, J. W. Griffith; B. J. Keely, **Cost Engineering Journal**, 1978

Chapter 03: Determining Discount Rate

1. *Real Options Application in Project Evaluation Practice*, Ken He, CCE, **Cost Engineering Journal**, 2007
2. *Risk and Capital Budgeting*, Reza Amir Khalili, **AACE International Transactions**, 1997
3. *Escalation: How Much is Enough?*, Glenn Butts, CCC, **AACE International Transactions**, 2007
4. *Acceptable Project Investment Criteria*, Tamuno Olumide Olu-Tima, **AACE International Transactions**, 2003
5. *Risk and Capital Budgeting*, Reza Amir Khalili, **AACE International Transactions**, 1997
6. *Inflation Adjustments on Construction Projects*, Jose Elias Campos Castillo, PE, **AACE International Transactions**, 1995
7. *Selection of Discount Rates for Project Evaluation: Principles and Pitfalls*, A. Lawrence Kolbe, **AACE Transactions**, 1983
8. *The Use of Commodity Futures in Estimating Long Range Construction Projects*, Benjamin E. Lazar, **AACE Transactions**, 1977

Chapter 04: Estimating Capital Cost of Design and Construction

1. *Lowering Pipeline Costs Through Applied Technology*, Andy Jenkins, P.Eng.; Tom Babuk, P.Eng.; Mo Mohitpour, PE, **AACE International Transactions**, 2005
2. *Project Estimate Reviews*, Douglas W. Leo, CCC; Scott W. Knotowicz, CCC, **AACE International Transactions**, 2005
3. *A Fast Track Value Analysis Methodology for Major Design-Build Construction Projects*, William F. Brouillard Jr., CCC, **Cost Engineering Journal**, 2003
4. *The Effect of Innovative Highway Construction Contract Methods*, Douglas D. Gransberg; Daniel F. Runde; James Stergios, **AACE International Transactions**, 2000
5. *A Different Approach to Factored Cost Estimating*, Kul B. Uppal, PE, **AACE Transactions**, 1993
6. *Planning a Capital Project*, DeWitt Patterson; James R. Uz, **AACE Transactions**, 1990
7. *Estimating Capital Cost Dynamics of New Technologies*, Giorgio Gottardi; Luis Copolla, **AACE Transactions**, 1988
8. *Application of Parametric Estimating to Cost Engineering*, James H. Black, CCE, **AACE Transactions**, 1984
9. *Estimation of a Double S-Curve Model*, Kun-Jung Hsu, **AACE International Transactions**, 2003
10. *Development and Maintenance of a Parametric Building Cost Estimating System*, Joseph George Masi, CCC, **Cost Engineering Journal**, 2003

- 
11. *Using Models in Parametric Estimating for Transportation Projects*, Robert H. Harbuck, **AACE International Transactions**, 2002
 12. *Parametric Estimating for Design Costs*, Asheesh Bajaj; Douglas D. Gransberg; Mark D. Grenz, **AACE International Transactions**, 2002
 13. *Development and Maintenance of a Parametric Building Estimating System*, Dominic L. Arioli; Joseph G. Masi, **AACE International Transactions**, 2002
 14. *Recommended Practice No. 19R-97 (Draft) - Estimate Preparation Costs in the Process Industries*, AACE International, **Cost Engineering Journal**, 1998
 15. *Cost Estimating Using Historical Costs*, Kymberli Popham, CCE, **AACE International Transactions**, 1996

Chapter 05: Estimating Operations Costs

1. *Ratio of Operating and Maintenance Costs to Initial Costs of Building Services Systems*, Shaomin Wu; Derek Clements-Croome, **Cost Engineering Journal**, 2007
2. *Cost and Schedule Control at the Enterprise Level*, John C. Philbrick, PE CCE, **AACE International Transactions**, 2011
3. *Lessons Learned Process Aligns with Project Life-Cycle, Operations and Engineering Governance*, Ewa Piatkiewicz, **AACE International Transactions**, 2007
4. *A Study on Nuclear Decommissioning Costs*, Mark Mills, **AACE International Transactions**, 2010
5. *Expanded Facility Condition Assessment Becomes Strategic Facility Consulting*, Michael D. Dell'Isola, PE FRICS; Benjamin Dutton, **AACE International Transactions**, 2010
6. *Methodology for Calculating a Pipeline Repair Cost*, Jeferson Faria Vianna; Enirton Ferreria Teles, **AACE International Transactions**, 2008
7. *Ratio of Operating and Maintenance Costs to Initial Costs of Building Services Systems*, Shaomin Wu; Derek Clements-Croome, **Cost Engineering Journal**, 2007
8. *Controlling Non-Construction Costs*, Peter R. Bredehoeft, Jr., **AACE International Transactions**, 2005
9. *Experiences with Front-End Integrated Estimating Tools*, Albert van der Werf, CCE, **AACE International Transactions**, 2004
10. *Selecting Optimum Mechanical Systems for Office Buildings*, John E. Schaufelberger; Raymond H. Jacobson, **Cost Engineering Journal**, 2000
11. *Airport Maintenance Costs*, Leopoldo Varela, CCE, **AACE Transactions**, 1992
12. *Economic Building Performance Modes (EBPM)*, Stephen J. Kirk, **AACE Transactions**, 1977

Chapter 06: Estimating Salvage/Residual Value

1. *Replacement of Obsolete Equipment*, R. A. Harris; Dr. D. J. Leech; Dr. R. G. Williams, **AACE Transactions**, 1992
2. *Optimize Equipment Replacement Costs*, Akhilesh Kumar, **AACE Transactions**, 1988
3. *Project Material & Equipment Control (Conception to In-Service)*, W. C. Legrow; Mark Pakan, **AACE Transactions**, 1983
4. *Investment and Depreciation Analysis*, Jagdish C. Agarwal; Dolph G. Ebeling, **AACE Transactions**, 1973

Chapter 07: Estimating Sustainability

1. *Cost Benefits of Building Green*, Alexia Nalewaik, CCE MRICS; Valerie Venters, CCC, **Cost Engineering Journal**, 2009
2. *Costs and Benefits of Building Green*, Alexia Nalewaik, CCE MRICS; Valerie Venters, CCC, **AACE International Transactions**, 2008
3. *Influence of Green Building on Project Costs*, John A. Kuprenas, PE, **AACE International Transactions**, 2010
4. *Understanding Green Building Cost and Value*, Tavis McAuley, **AACE International Transactions**, 2008


- 
5. *A Method for Determining Optimum Thickness of Insulation for Buildings*, Courtland A. Collier, CCE, **AACE Transactions**, 1978
 6. *Budgeting Green: A Comprehensive Methodology*, Peter Morris; Lisa Fay Matthiessen, **AACE International Transactions**, 2005
 7. *Going the Distance: The Impact of Sustainability on Programming and Budgeting*, Wade L. Martin, **Cost Engineering Journal**, 2005
 8. *Quantifying the Benefits of Sustainable Buildings*, Benson Kwong, PE CCE, **AACE International Transactions**, 2004
 9. *A Budget Estimating Method of Environmental Cost for Multiple Housing Projects*, Chansik Park; Sungho Hong; Changwan Kim; Jaeho Lee, **AACE International Transactions**, 2003
 10. *Competing With Environment-Friendly Construction Practices*, Alfred B. Ngowi, **Cost Engineering Journal**, 2000
 11. *The Role of Environmental Economics in the Cost Management of Projects*, Dr. Craig Langston; Caroline Mackley, **AACE International Transactions**, 1998
 12. *Estimating National Costs Associated with Public Law 92-500 (the Federal Water Pollution Control Act Amendments of 1972)*, Michael D. Giggey; Stanley D. Elkerton, **AACE Transactions**, 1976

Chapter 08: Life-Cycle Cost Risk Analysis

1. *Schedule and Cost Risk Evaluation*, Rashmi Prasad, **AACE International Transactions**, 2007
2. *Construction Trends and the Cost Engineer*, Talal Abi-Karam, PE CCE, **Cost Engineering Journal**, 2006
3. *Project Risk Identification and Management*, Mark W. Cohen, PE; Glen R. Palmer, **AACE International Transactions**, 2004
4. *Quantifying Pavement Life Cycle Cost Inflation Uncertainty*, Douglas D. Gransberg, PE CCE; James Diekmann, **AACE International International Transactions**, 2004
5. *The Real Cost of Mitigating Delays*, John J. Ciccarelli, PE CCE, **AACE International Transactions**, 2004
6. *Project Management Oversight: An Effective Risk Management Tool for EPC/Design-Build Contracts*, George E. Baram, P.Eng. CCE, **AACE International Transactions**, 2003
7. *Project Risk Management: A Combined Analytic Hierarchy Process and Decision Tree Approach*, Prasanta Kumar Dey, **Cost Engineering Journal**, 2002
8. *Project Capital Cost Risks and Contracting Strategies*, Keith Pedwell, P.Eng.; Dr. Francis T. Hartman, P.Eng.; Dr. George F. Jergeas, P.Eng, **Cost Engineering Journal**, 1998
9. *Linking Contractor Payments to Contractor Performance*, Quentin W. Fleming; Joel M. Koppelman, **AACE International Transactions**, 1995

Chapter 09: Life-Cycle Cost Case Studies

1. *Fuel Cell Town: A Feasibility Study*, Iftikhar Kamil Madni, CCE, **AACE International Transactions**, 2006
2. *Whole Life Cycle Cost for Chicago Type Bascule Bridge*, Yingchun Zhang; David A. Novick, PE; Ahmad Hadavi, PE; Raymond J. Krizek, PE, **Cost Engineering Journal**, 2008
3. *Estimating Uncertainty for a Life-Cycle Cost Management Program*, Dan Melamed, CCC; Bryan Skokan, PE; Mathew Zenkovich; Dan Kocher, **Cost Engineering Journal**, 2008
4. *Implementing an EVMS/Cost Controls System for FAA's TAMR Program*, Mark Walden; Rohit Iyer, **AACE International Transactions**, 2010
5. *The Use of Historical Costs from the Rocky Flats Environmental Technology Site for Estimating Uncertainty for the Life-Cycle Cost of the US Department of Energy Environmental Management Program*, Dan Melamed; Bryan Skokan, PE; Mathew Zenkovich; Dan Kocher, **AACE International Transactions**, 2007
6. *New Nuclear Power Plants – Learning from History to Understand Costs and Mitigate Risks*, George B. Bradshaw, PE CCE; Christopher O. Gruber, CCC, **AACE International Transactions**, 2007

- 
7. *Life Cycle Costs and Economic Feasibility of the Atmospheric Fluidized Bed Combustion Power Plants*, Richard Holstein, **AACE Transactions**, 1984
 8. *The Economics of Geothermal Power*, Laxmidas F. ("LV") Papat, CCE, **AACE Transactions**, 1982
 9. *Life Cycle Analysis for Power Industry*, Dr. Yue-Chau Wong, **AACE Transactions**, 1979
 10. *Life Cycle Costing In Manufacturing Industries*, M. Kent Anderson, **AACE Transactions**, 1978

Chapter 10: Life-Cycle Cost Analysis in the International Context

1. *Development of an International Cost Database*, Paul Martin Hewitt, **AACE International Transactions**, 2007
2. *Project Planning and Scheduling and its Impact to Project Outcome: A Study of EPC Projects in Canada*, Janaka Y. Ruwanpura; Tanveer Nabi Ahmed; Karim Kaba; Gerald Patrick Mulvany, **AACE International Transactions**, 2006
3. *A Study of Advanced Project Control System for Korean Nuclear Power Plant Construction Project*, Myung Youl Yoon; Jae Hee Han, **AACE International Transactions**, 2006
4. *Managing Risk for Global Energy Projects*, Nick J. Lavingia, PE, **AACE International Transactions**, 2005
5. *Assessment of the Problems of Application of Life Cycle Costing in Construction Projects*, Sadi A. Assaf; Abdulmohsen Al-Hammad; Osama A. Jannadi; Sami Abu Saad, **Cost Engineering Journal**, 2002
6. *Risk Management in Construction: An Approach for Contractors in South Korea*, Soon Kim; Deepak Bajaj, **Cost Engineering Journal**, 2000
7. *Environmental Investment Blueprint in Southern Africa*, Thomas Richard Muller, **Cost Engineering Journal**, 1997

Author Index

Chronological Index

About the Editors