# TABLE OF CONTENTS

**REPORT BODY**

About This Report..................................................................................................................................................10

Executive Summary...................................................................................................................................................12

About Ethylene Glycol..................................................................................................................................................15

  Description...........................................................................................................................................................15

  Applications..........................................................................................................................................................15

  Ethylene Glycol Production Pathways Diagram..................................................................................................16

Process Overview..........................................................................................................................................................17

  Product(s) Generated............................................................................................................................................17

  Process Inputs........................................................................................................................................................17

  Technology Maturity Assessment...........................................................................................................................19

  Highlights & Remarks..........................................................................................................................................21

Industrial Site..............................................................................................................................................................22

  Introduction..........................................................................................................................................................22

  Process Unit Description...................................................................................................................................24

  Site Infrastructure Description.............................................................................................................................28

  Key Process Input and Output Figures..................................................................................................................32

  Labor Requirements............................................................................................................................................32

Capital Investment.......................................................................................................................................................33

  Fixed Capital........................................................................................................................................................34

  Working Capital....................................................................................................................................................36

  Additional Capital Requirements..........................................................................................................................37

  Total Capital Investment.......................................................................................................................................38

Operating Costs..........................................................................................................................................................39

  Operating Variable Costs....................................................................................................................................41

* Available in 'Extended' and 'Advanced' versions only
LIST OF TABLES

Economic Analysis Summary..................................................................................................................14
Process Technology Maturity Scale......................................................................................................20
Raw Materials Consumption..................................................................................................................32
Labor Requirements...............................................................................................................................32
Plant Cost Estimate Accuracy Range (USD Million).............................................................................35
Owner’s Cost Summary..........................................................................................................................35
Fixed Capital Summary..........................................................................................................................36
Working Capital Breakdown....................................................................................................................36
Additional Capital Requirements Breakdown..........................................................................................37
Operating Variable Costs Breakdown......................................................................................................41
Operating Fixed Costs Breakdown...........................................................................................................42
Operating Cost Summary.......................................................................................................................42
Corporate Overhead Costs Breakdown.....................................................................................................45
Ethylene Glycol Production from Syngas - Economic Datasheet.............................................................47
Process Contingency Factor Estimation Methodology............................................................................56
Project Contingency Factor Estimation Methodology............................................................................57
Fixed Capital Estimate Accuracy Range..................................................................................................61
Maintenance Cost Estimation Methodology............................................................................................64
Marketing & Advertising Cost Estimation Methodology........................................................................66
Research & Development Cost Estimation Methodology........................................................................66
Expected ROCE Factor Estimation Methodology..................................................................................67

Net Utility Consumption Rates.............................................................................................................D.2
Utilities Share in Total Operating Cost..................................................................................................D.3
Capital Investment Analysis for Different Capacities............................................................................D.5
Operating Cost & Product Value Analysis for Different Capacities.....................................................D.6

* Available in 'Extended' and 'Advanced' versions only
Project Phases Schedule......................................................................................................................... D.7
Materials & Utilities Prices (United States)............................................................................................... D.9

* Available in 'Extended' and 'Advanced' versions only
LIST OF FIGURES

Process Schematic Diagram.................................................................13
Ethylene Glycol Production Pathways Diagram....................................................16
Industrial Site Configuration........................................................................23
Ethylene Glycol Production Facility - Block Flow Diagram..................................25
Plant Cost Summary (USD Million).......................................................................34
Capital Investment Summary (USD Million).............................................................38
Operating Cost Breakdown (USD/mt)......................................................................43
Product Value Composition (USD/mt).....................................................................46
Production Cost Report Development Methodology.............................................52
Cost Contribution of Each Utility.........................................................................D.3
Capital Investment (USD Million) Versus Plant Capacity......................................D.4
Operating Cost Versus Plant Capacity..................................................................D.5
Implementation & Construction Schedule.............................................................D.8

* Available in 'Extended' and 'Advanced' versions only