

# CONTENTS

## GENERAL

### PROJECT ACTIVITIES

ISAB Energy and Sarlux IGCC Projects Started Up In 2000	1-1
API Energia Tar Gasification Plant Started Up In 2000	1-2
Demkolec Project Tests Biomass Feedstock	1-3

### CORPORATIONS

Emery Recycling Corporation Wants to Scale Up Whole-Tire-Feed Gasifier	1-4
Shell Expanding its Investments In Fuel Cells and Renewables	1-6

### GOVERNMENT

DOE Will Boost Fuel Cell Program	1-8
DOE Outlines Strategies for Syngas Research and Commercialization	1-8
Energy Department Announces National Bioenergy Center	1-11

### ENERGY POLICY & FORECASTS

EIA Annual Energy Outlook 2001 Forecasts Higher Energy Use	1-11
Governors' Group Urges Federal Leaders to Adopt Tax Incentives and a National Energy Policy	1-14

### ECONOMICS

Feasibility Study Shows DME Competitive With Conventional Fuels	1-15
BGL Gasification of Low-Cost Fuels Competitive With Natural Gas Combined Cycle	1-19
Petcoke Gasification at U.S. Refineries Shows Promise	1-21
Computer Model Assesses Cost of Biomass, Waste Fuel	1-24
DOE Early Entrance Coproduction Project Picks Refinery as Basis	1-25

### TECHNOLOGY

Catalytic Biomass Pyrolysis In CFB Demonstrated	1-29
Steam Reforming of DME to Feed Fuel Cell Seems Feasible	1-31
Synthesis Gas Converted to Ethanol Via Fermentation	1-32
Lurgi Develops Multipurpose Gasification Process	1-35
Wood Gasifier Tar Eliminated By Charcoal Bed	1-37
Acetylene Could Be Synthetic Fuel for Transportation	1-39
Shell Gasifier Finds Applications With Solid, Liquid and Gaseous Feedstocks	1-40
Fluidized-Bed Cogasification of Wood and Low-Quality Coal Looks Good In Pilot Tests	1-40
Gasification of Municipal Solid Waste Tested In High-Temperature Winkler	1-44
Co-Pyrolysis of Turkish Oil Shale and Lignite Yields Synergy	1-48
Gasification of Residue Will Provide Hydrogen for Refining Industry In India	1-49

### COMING EVENTS

1-52

## OIL SHALE

### PROJECT ACTIVITIES

Stuart Stage 1 Moving Into Operational Phase	2-1
American Soda Mining Nahcolite In Piceance Creek Basin Oil Shale Deposit	2-2
Shell Continues Pilot Test of <i>In Situ</i> Recovery Method	2-3
Suncor Writes Down Assets at Stuart Project	2-4

### CORPORATIONS

SPP/CPM Raises \$31.6 Million In New Stock Offering	2-4
SPP/CPM Respond to Suncor's Announced Write-Down	2-5
Cleveland-Cliffs Wins Oil Shale Claims	2-6
Marathon Sells Its Oil Shale Mineral Rights to Coastal	2-6
Suncor Energy Defers Negotiations With Estonian Government	2-7

<b>TECHNOLOGY</b>	
Process Outlined for Turkish Oil Shales	2-7
Co-Pyrolysis With Plastic Increases Decomposition Rate of Oil Shale	2-10
Jordanian Oil Shale Shows Gasification Potential	2-11
<b>RESOURCE</b>	
Egyptian Oil Shales Characterized	2-12
<b>STATUS OF OIL SHALE PROJECTS</b>	2-15
<b>COMPLETED AND SUSPENDED PROJECTS</b>	2-29
<b>INDEX OF COMPANY INTERESTS</b>	2-31

## OIL SANDS

<b>PROJECT ACTIVITIES</b>	
Syn crude's Aurora Mine Leads Off New ERA In Energy Production	3-1
Sincor Project Begins Production In Venezuela	3-1
CNRL Starts Drilling for Major Oil Sands Project at Mic Mac	3-2
Japan Canada Oil Sands to Increase Production at Hangingstone	3-2
OPTI Proposes SAGD Project at Gregoire Lake	3-2
Petro-Canada Begins MacKay River Project Construction	3-3
Solv-Ex Runs Out of Money; Suspends All R&D	3-3
PanCanadian Breaks Ground for Christina Lake Heavy Oil Project	3-7
AEC Begins Foster Creek Project, Expands Cold Lake Pipeline	3-7
Synco Energy Lines Up Funding for Sunnyside Project	3-8
<b>CORPORATIONS</b>	
Shell Canada Announces \$4.2-Billion Investment Plan	3-8
PDVSA-Bitor Develops Improved Orimulsion Formula	3-9
Koch Sets Up TrueNorth Energy to Manage Fort Hills Project	3-11
<b>GOVERNMENT</b>	
Alberta EUB Maps Oil Sands Development to 2035	3-11
<b>ECONOMICS</b>	
Alberta <i>In Situ</i> Bitumen Projects Hit \$5B—Problems Seen	3-16
Alberta Oil Sands Capital Expenditure to Peak In 2001	3-18
Economic Outlook for Heavy Oil Producers May Be Deteriorating	3-18
<b>TECHNOLOGY</b>	
Underground Mining With TBM Proposed for Oil Sands	3-22
CPJ Process Offers On-Site Upgrading of Heavy Oil	3-24
<b>STATUS OF OIL SANDS PROJECTS</b>	3-27
<b>COMPLETED AND SUSPENDED PROJECTS</b>	3-41
<b>INDEX OF COMPANY INTERESTS</b>	3-46

## COAL

<b>PROJECT ACTIVITIES</b>	
Carbon Dioxide From Great Plains Plant Flowing Into Canada	4-1
Eagle Project Gasification Pilot Plant Under Construction In Japan	4-3
Sierra Pacific Agrees to Sell Piñon Pine Power Station to WPS Power Development	4-5
Noell Gasifier Will Convert High-Nitrogen Organic Wastes at Seal Sands, UK	4-5
Tampa Electric IGCC Project Updated	4-7
Western SynCoal Finds New Customer and Gets New Owner	4-10
Waste Management Leads Pennsylvania Anthracite Gasification Project	4-11
Motiva Delaware City Refinery Repowering Project Started Up	4-12
Liquid Phase Methanol Demonstration Keeps Chugging Along	4-13
Global Energy Describes the Kentucky Pioneer Energy Project	4-14

SGII Signs Agreement to Sell ENCOAL Cresylic Acids to Merisol	4-17
HTW Fluid-Bed Gasifier to Power 400-MW Czech IGCC Project	4-17
Environmental Impact Statement Still Pending for CPICOR	4-18
<b>CORPORATIONS</b>	
Sasol Finds Increased Efficiency Sets the Path to Higher Profits	4-18
EPRI Launches Global Initiative to Generate Clean Coal Power	4-21
Dakota Gasification Making Record Profits	4-22
<b>GOVERNMENT</b>	
DTI Sponsoring UCG Demonstration in the UK	4-22
Congress Enacts New Powerplant Improvement Initiative	4-23
<b>ENERGY POLICY &amp; FORECASTS</b>	
DOE Estimates Near-Term U.S. Market Potential for Over 300 IGCC Trains	4-24
<b>ECONOMICS</b>	
550-MW Single-Train IGCC Will Reduce Costs	4-25
ARCH Hydrogasification Process is Economical at World Oil Price of \$30 per Barrel	4-28
<b>TECHNOLOGY</b>	
First Results Revealed for 100-TPD Flash Pyrolysis Pilot Plant	4-31
Closed-Coupled Gasification Microgeneration Could Power Coal Mines	4-33
Correlation Developed for Predicting Slag Viscosity In Entrained-Flow Gasifiers	4-35
Sasol Optimization Study Shows Gasifier Capacity Could Be Increased By 50 Percent	4-36
IGCC Optimization Study to Be Based On Wabash River Project	4-39
GE Gas Turbine Advances Enhance IGCC Viability	4-42
Carbon Products Consortium Reports Progress	4-47
<b>INTERNATIONAL</b>	
DTI/Mitsui Babcock Studying Air-Blown Gasification Cycle for China	4-49
U-Gas Process Termed Suitable for Ammonia Production In China	4-50
<b>STATUS OF COAL PROJECTS</b>	4-54
<b>COMPLETED AND SUSPENDED PROJECTS</b>	4-80
<b>INDEX OF COMPANY INTERESTS</b>	4-95

## **NATURAL GAS**

<b>PROJECT ACTIVITIES</b>	
Gas-To-Liquids Plant to Be Built In Trinidad	5-1
Gas-To-Liquids Plant Set for Escravos Project In Nigeria	5-1
GTL Projects Blossoming Around the World	5-1
<b>CORPORATIONS</b>	
Rentech Reports 75 Percent Jump In Revenue for FY 2000	5-2
Chevron, Sasol Finalize Global GTL Alliance, to Invest \$5 Billion	5-4
Shell Jumps Into Lead With Announced GTL Plant In Egypt; Could Spend \$6 Billion	5-6
<b>ENERGY POLICY &amp; FORECASTS</b>	
Gas-To-Liquids and Methane Hydrates Predicted In Top Ten Innovations for 2010	5-7
U.S. Natural Gas Prices Projected to Drop In Near-Term Future	5-8
<b>TECHNOLOGY</b>	
New Gas-To-Liquids Process Developed In Japan	5-9
Hydrogen Produced By the Direct Cracking of Methane	5-10
<b>RESOURCE</b>	
Researchers Identify Differences In Gas Hydrate Resources	5-11
Forest Oil Finds Major Gas Field Off South Africa—GTL Mooted	5-12
<b>STATUS OF NATURAL GAS PROJECTS</b>	5-13