

The Global Market for Alternative Naphtha

<https://marketpublishers.com/r/GA9C34E6AD64EN.html>

Date: November 2024

Pages: 175

Price: US\$ 1,300.00 (Single User License)

ID: GA9C34E6AD64EN

Abstracts

The market for alternative naphtha is driven by multiple factors including sustainability goals, regulatory pressure, and corporate commitments to reduce fossil fuel dependence. The global push towards circular economy and reduced carbon emissions has positioned alternative naphtha as a crucial component in the chemical industry's transition to renewable feedstocks. Major chemical companies are increasingly incorporating alternative naphtha into their feedstock mix through direct investment in production facilities or strategic partnerships, with the market comprising several key segments including bio-based naphtha from HVO/HEFA processes, pyrolysis-based naphtha from plastic waste, CCU-derived naphtha, and biomass-derived alternatives. The market's growth trajectory is supported by increasing scale of production facilities, improving cost competitiveness, expanding end-user acceptance, strengthening policy support, and growing investment in technology development, though challenges remain including feedstock availability and cost, technology scalability, infrastructure adaptation requirements, and market price competition with conventional naphtha.

This comprehensive market report provides detailed insights into the rapidly evolving global alternative naphtha market, analyzing key trends, technologies, and market dynamics shaping the transition from fossil-based to renewable and circular feedstocks in the petrochemical industry. The report provides in-depth analysis of both demand-side and supply-side factors influencing market growth, including detailed capacity analyses across different production routes and regions.

Report contents include:

Production Routes Covered including:

Bio-based naphtha from HVO/HEFA processes

Pyrolysis-based naphtha from plastic and tire waste

Biomass-derived alternatives

CCU (Carbon Capture and Utilization) derived naphtha

'Alcohol-to-Jet' conversion routes

Production technologies including:

Detailed analysis of HVO/HEFA processes and co-processing capabilities

Thermal and catalytic pyrolysis technologies for waste plastics and tires

Biomass gasification processes

Carbon capture and conversion technologies

Fischer-Tropsch synthesis applications

Novel alcohol conversion processes

Feedstock options including:

Renewable sources (vegetable oils, animal fats, used cooking oils)

Waste materials (plastic waste, tire waste)

Novel feedstocks (CO₂, biomass)

Feedstock availability and pricing trends

Quality requirements and specifications

Market Capacity and Production including:

Current and planned production capacity (2022-2026)

Regional distribution of production facilities

Major producer profiles and market shares

Capacity utilization rates

Future capacity additions and expansions

Technology Integration and Infrastructure :

Integration with existing refinery infrastructure

Steam cracker feed requirements

Process optimization strategies

Equipment configuration needs

Operating parameters and performance metrics

Detailed profiles of 39 key companies including:

Major oil and chemical companies

Technology providers

Specialized alternative naphtha producers

Start-ups and innovators. Companies profiled include Borealis, CJ CheilJedang, Diamond Green Diesel, Eni, HD Hyundai Chemical, Idemitsu, Infinium, Neste, S-Oil, SK Geocentric, PT Kilang Pertamina Internasional, UPM Biofuels and more....

Sustainability and Environmental Impact including:

Carbon footprint comparisons across production routes

Sustainability metrics and certification schemes

Circular economy integration

Environmental regulations and compliance requirements

Future market projections including:

Five-year capacity forecasts

Technology development trajectories

Investment trends and opportunities

Market growth drivers and constraints

Value Chain Analysis:

Feedstock supply chains

Production processes

Distribution networks

End-user applications

Value chain integration strategies

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Overview
- 1.2 Demand-side pull
- 1.3 Supply-side pull
- 1.4 Global Capacity Analysis

2 INTRODUCTION

- 2.1 Naphtha Description
- 2.2 Refineries & Steam Cracking
 - 2.2.1 Current Technology Status
 - 2.2.1.1 Process Overview
 - 2.2.1.2 Equipment Configuration
 - 2.2.1.3 Operating Parameters
 - 2.2.1.4 Performance Metrics
- 2.3 Alternative Naphtha
 - 2.3.1 Production routes
 - 2.3.1.1 Bio-based Routes
 - 2.3.1.2 Thermal/Chemical Routes
 - 2.3.1.3 Hybrid Processes
 - 2.3.2 Feedstocks
 - 2.3.2.1 Renewable Sources
 - 2.3.2.2 Waste Materials
 - 2.3.2.3 Novel Feedstocks

3 ALTERNATIVE BIO-BASED NAPHTHA

- 3.1 Introduction
- 3.2 Feedstocks
 - 3.2.1 Quality
 - 3.2.2 Feedstock Types
 - 3.2.2.1 Vegetable Oils
 - 3.2.2.2 Animal Fats
 - 3.2.2.3 Used Cooking Oils
 - 3.2.2.4 Novel Feedstocks
- 3.3 Co-processing

- 3.3.1 Technology – co-processing of fats/oils etc. via existing refinery assets
- 3.3.2 Co-processing capacity
- 3.4 HVO/HEFA
 - 3.4.1 Introduction
 - 3.4.2 Technologies
 - 3.4.3 Renewable (bio-based) naphtha for steam cracking
 - 3.4.4 Capacity for HVO/HEFA processing
 - 3.4.5 Production for steam cracking
 - 3.4.6 Bio-attributed value chains via steam cracking of naphtha

4 ALTERNATIVE NAPHTHA VIA THERMAL/CATALYTIC PROCESSES

- 4.1 Introduction
- 4.2 Alternative naphtha via plastics & tyre wastes
 - 4.2.1 Technology
 - 4.2.2 Capacity for pyrolysis oil from plastics and tyres
 - 4.2.3 Plastics pyrolysis & alternative naphtha
 - 4.2.4 Pyrolysis of waste tyres
- 4.3 Biomass processing
 - 4.3.1 Introduction
 - 4.3.2 Capacity
- 4.4 Gasification Processes
 - 4.4.1 Introduction
 - 4.4.2 Technology
 - 4.4.3 Capacity

5 CCU-BASED ALTERNATIVE NAPHTHA

- 5.1 Technology Overview
 - 5.1.1 Carbon Capture Technologies
 - 5.1.1.1 Absorption Processes
 - 5.1.1.2 Adsorption Systems
 - 5.1.1.3 Membrane Separation
 - 5.1.1.4 Novel Technologies
 - 5.1.2 CO₂ Conversion
 - 5.1.2.1 Chemical Processes
 - 5.1.2.2 Catalytic Systems
 - 5.1.2.3 Biological Routes
 - 5.1.2.4 Hybrid Approaches

- 5.2 Process Technology
 - 5.2.1 Syngas Production
 - 5.2.1.1 Production Methods
 - 5.2.2 Fischer-Tropsch Processing
- 5.3 Capacity
- 5.4 Companies

6 ALTERNATIVE NAPHTHA VIA “ALCOHOL TO JET”

- 6.1 Process Technology
 - 6.1.1 Alcohol Production
 - 6.1.2 Conversion Process
 - 6.1.3 Product Upgrading
 - 6.1.4 Process Integration
- 6.2 Market Applications

7 COMPANY PROFILES 135 (39 COMPANY PROFILES)

8 APPENDICES

- 8.1 Glossary of Terms
- 8.2 12. List of Abbreviations
- 8.3 Research Methodology

9 REFERENCES

List Of Tables

LIST OF TABLES

- Table 1. Market overview for alternative naphtha.
- Table 2. Technology Readiness Levels (TRL) by Production Route.
- Table 3. Investment Costs Comparison Across Different Production Routes.
- Table 4. Operating Cost Comparison Across Production Routes.
- Table 5. Alternative Naphtha Feedstocks.
- Table 6. Feedstock Comparison for Different Alternative Naphtha Routes.
- Table 7. Feedstock Price Analysis (2020-2026).
- Table 8. Chemical Composition Analysis of Different Alternative Naphtha Types.
- Table 9. Bio-based naphtha markets and applications.
- Table 10. Key Quality Parameters for Bio-based Naphtha vs. Fossil Naphtha.
- Table 11. HVO/HEFA & co-processing companies.
- Table 12. Co-processing capacity by region, current and estimated.
- Table 13. Major HVO/HEFA Technology Providers and Their Process Specifications.
- Table 14. Global production of renewable (bio-based) steam cracker feedstock from HVO/HEFA, 2022-2035 (KT).
- Table 15. Global production of renewable (bio-based) steam cracker feedstock from HVO/HEFA (KT), current and planned (5 year forecast).
- Table 16. Global capacity for HVO/HEFA processing and co-processing current and planned (5 year forecast).
- Table 17. Steam Cracker Feed Requirements and Alternative Naphtha Properties.
- Table 18. Production of bio-based steam cracker feedstock from HVO/HEFA, current and planned (5 year forecast).
- Table 19. Properties of pyrolysis oils .
- Table 20. Plastics pyrolysis plants.
- Table 21. Plastic pyrolysis capacities by producer.
- Table 22. Capacity for pyrolysis oil from waste plastics, current and planned (5 year forecast).
- Table 23. Plastics pyrolysis waste processing capacities, Capacity for pyrolysis oil from waste plastics, current and planned (5 year forecast).
- Table 24. Capacities for production of pyrolysis oil from waste plastic, current and planned (5 year forecast).
- Table 25. Average composition of fuel-efficient passenger car and truck tyres. .
- Table 26. Tyre Pyrolysis capacities by producer .
- Table 27. Tyre crumb processing capacities, current and planned (5 year forecast).
- Table 28. Capacities for production of pyrolysis oil for chemicals, current and planned (5

year forecast).

Table 29. EOL for waste tyres.

Table 30. Capacities from thermal or catalytic pyrolysis of biomass, current and planned (5 year forecast).

Table 31. Capacities via biomass gasification, current and planned (5 year outlook).

Table 32. Carbon Footprint Comparison Across Production Routes.

Table 33. CO₂ based hydrocarbon via FT synthesis, current and planned (5 year outlook).

Table 34. Global capacity for CO₂ based hydrocarbon via FT synthesis.

Table 35. Companies producing CO₂-based syngas and synthetic crude oil.

List Of Figures

LIST OF FIGURES

Figure 1. Alternative naphtha production routes.

Figure 2. HVO/HEFA process

Figure 3. Global production of renewable (bio-based) steam cracker feedstock from HVO/HEFA (KT), current and planned (5 year forecast).

Figure 4. Production of bio-based steam cracker feedstock from HVO/HEFA, current and planned (5 year forecast).

Figure 5. Capacity for pyrolysis oil from waste plastics, current and planned (5 year forecast).

Figure 6. Plastics pyrolysis waste processing capacities, Capacity for pyrolysis oil from waste plastics, current and planned (5 year forecast).

Figure 7. Plastics pyrolysis waste processing capacity, current and planned (5 year forecast).

Figure 8. Capacities for production of pyrolysis oil from waste plastic, current and planned (5 year forecast).

Figure 9. Capacities for production of pyrolysis oil for chemicals, current and planned (5 year forecast).

Figure 10. Capacities from thermal or catalytic pyrolysis of biomass, current and planned (5 year forecast).

Figure 11. Fuels & naphtha via biomass gasification.

Figure 12. pyrolysis of biomass .

Figure 13. Global carbon demand for chemicals and materials.

Figure 14. Fuels & naphtha via carbon capture and utilisation.

Figure 15. Ethanol to jet upgrading steps process.

Figure 16. Corbion FDCA production process.

Figure 17. The Proesa® Process.

I would like to order

Product name: The Global Market for Alternative Naphtha

Product link: <https://marketpublishers.com/r/GA9C34E6AD64EN.html>

Price: US\$ 1,300.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GA9C34E6AD64EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970