

Australia Green Hydrogen Market Research Report by Technology [Alkaline Electrolyzer, Proton Exchange Membrane Electrolyzer, Solid Oxide Electrolyzer, Anion Exchange Membrane (AEM) Electrolyzer], by Location (Onshore, Offshore), by End-Use [Power Generation, Transport, Heating, Industry (Chemical, Steel, Refineries, Others)] Forecast till 2035

Market Report | 2025-11-12 | 133 pages | Market Research Future

AVAILABLE LICENSES:

- Single User Price \$2950.00
- Enterprisewide Price \$3950.00
- \$5250.00

Report description:

The Australia Green Hydrogen Market is projected to reach USD 68,579.67 million by 2035, growing at a CAGR of 6.758% from 2025 to 2035. One of the main advantages of green hydrogen is that it is powered by renewable energy sources and therefore, represents a real long-term solution to the problem of global carbon emissions.

Abundant Renewable Energy as the Core Market Driver

Australia's strong solar and wind resources provide cheap, large-scale renewable power for hydrogen production. The overall costs of production are reduced, and the economic viability of the project is uplifted. Accordingly, renewable abundance is at the very core of the market's growth potential.

Technology, Location & End-Use Overview

Technology

- Alkaline Electrolyzer: Mature, cost-effective hydrogen production system.
- PEM Electrolyzer: Fast, flexible output for variable renewables.
- Solid Oxide Electrolyzer: High-efficiency hydrogen from elevated temperatures.
- AEM Electrolyzer: Emerging low-cost solution with improved durability.

Location

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- Onshore: Land-based projects offering scalable deployment.
- Offshore: Sea-based installations utilizing strong wind resources.

End-Use

- Power Generation: Hydrogen used for clean electricity supply.
- Transport: Fuels vehicles requiring long-range clean energy.
- Heating: Provides renewable heat for buildings, industries.
- Industry
 - o Chemical: Feedstock for ammonia and chemical processing.
 - o Steel: Enables low-carbon steelmaking through green hydrogen.
 - o Refineries: Supports cleaner refining and desulfurization processes.
 - o Others: Additional industrial applications needing clean hydrogen.

Strategic Edge in Energy Transition

Australia's green hydrogen market keeps expanding as the energy transition wave continues to push industries to seek cleaner and low-carbon energy sources. Strong renewable energy resources and rising decarbonization needs give hydrogen a key strategic role.

Key Report Attributes

- Market Size 2024: USD 33,740.84 Million
- Market Size 2035: USD 68,579.67 Million
- CAGR (2025-2035): 6.758%
- Base Year: 2024
- Market Forecast Period: 2025-2035

Industry Segmentations Growth

- By Technology: Alkaline Electrolyzer - 6.902%, Proton Exchange Membrane Electrolyzer - 6.657%.
- By Location: Onshore - 6.840%, Offshore - 3.974%.
- By End-Use: Power Generation - 6.080%, Transport - 6.843%.

Table of Contents:

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY	17
2 MARKET INTRODUCTION	. 23
2.1 DEFINITION	. 23
2.2 SCOPE OF THE STUDY	23
2.3 RESEARCH OBJECTIVE	. 23
2.4 MARKET STRUCTURE	24
3 RESEARCH METHODOLOGY	. 25
3.1 OVERVIEW	. 25
3.2 DATA FLOW	26
3.2.1 DATA MINING PROCESS	27
3.3 PURCHASED DATABASE:	. 28
3.4 SECONDARY SOURCES:	29
3.4.1 SECONDARY RESEARCH DATA FLOW:	30
3.5 PRIMARY RESEARCH:	. 31
3.5.1 PRIMARY RESEARCH DATA FLOW:	. 32
3.6 APPROACHES FOR MARKET SIZE ESTIMATION:	. 33

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

3.6.1 CONSUMPTION & NET TRADE APPROACH	. 33
3.7 DATA FORECASTING	33
3.7.1 DATA FORECASTING TECHNIQUE	. 34
3.8 DATA MODELING	35
3.8.1 MICROECONOMIC FACTOR ANALYSIS:	. 35
3.8.2 DATA MODELING:	35
3.9 TEAMS AND ANALYST CONTRIBUTION	. 37
4 MARKET DYNAMICS	40
4.1 INTRODUCTION	40
4.2 MARKET GROWTH FACTOR ANALYSIS	. 40
4.3 DRIVERS	41
4.3.1 FALLING ELECTROLYZER CAPITAL COST TRENDS	41
4.3.2 ABUNDANT RENEWABLE RESOURCES IN AUSTRALIA	. 43
4.4 RESTRAINTS	45
4.4.1 POLITICAL AND POLICY INSTABILITY	. 45
4.4.2 WATER AVAILABILITY CONCERNS	46
4.5 OPPORTUNITY	. 48
4.5.1 DECARBONISATION OF HEAVY INDUSTRIES	. 48
4.5.2 EXPORT OF GREEN HYDROGEN	50
4.6 RUSSIA UKRAINE WAR IMPACT ANALYSIS	. 51
4.6.1 INCREASED COMPETITIVENESS OF GREEN HYDROGEN	. 51
4.6.2 ENERGY SECURITY CONSIDERATIONS	51
4.6.3 EXPORT OPPORTUNITIES	51
4.6.4 SHIFT IN INVESTMENT FOCUS	51
4.6.5 GLOBAL TECHNOLOGY COST REDUCTIONS	. 51
4.7 IMPACT OF TRUMP 2.0	52
4.7.1 CHALLENGES FOR EXPORT COMPETITIVENESS	52
4.7.2 TRADE BARRIERS AND MARKET ACCESS	. 52
4.7.3 IMPACT ON GLOBAL INVESTMENT FLOWS	. 52
4.7.4 REGIONAL AND DOMESTIC MARKET FOCUS	. 52
4.7.5 REDUCED GLOBAL POLICY ALIGNMENT	. 52
4.8 IMPACT ANALYSIS OF COVID-19	53
4.8.1 IMPACT ON SUPPLY CHAIN OF GREEN HYDROGEN	53
4.8.2 IMPACT ON MARKET DEMAND OF GREEN HYDROGEN	53
5 MARKET FACTOR ANALYSIS	. 54
5.1 SUPPLY CHAIN ANALYSIS	54
5.1.1 PARTICIPANTS	. 54
5.1.1.1 RAW MATERIALS	54
5.1.1.2 GREEN HYDROGEN PRODUCTION	. 54
5.1.1.3 STORAGE	. 55
5.1.1.4 TRANSPORTATION & DISTRIBUTION	56
5.1.1.5 END USERS	. 56
5.1.2 VALUE PERCOLATION ACROSS THE CHAIN	56
5.1.3 INTEGRATION LEVELS	57
5.1.4 KEY ISSUES ADDRESSED	57
5.2 PORTER'S FIVE FORCES MODEL	. 58
5.2.1 BARGAINING POWER OF SUPPLIERS (MODERATE)	59

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.2.2 BARGAINING POWER OF BUYERS (MODERATE TO HIGH)	59
5.2.3 THREAT OF NEW ENTRANTS (MODERATE)	. 59
5.2.4 THREAT OF SUBSTITUTES (LOW TO MODERATE)	. 59
5.2.5 INTENSITY OF RIVALRY (MODERATE)	59
5.3 PRICING ANALYSIS (USD THOUSAND/TON)	60
5.3.1 FACTORS IMPACTING THE PRICING	. 61
5.3.1.1 COST OF RENEWABLE ELECTRICITY	61
5.3.1.2 CAPITAL COST OF ELECTROLYZERS	61
5.3.1.3 CAPACITY UTILIZATION RATE	. 61
5.3.1.4 POLICY SUPPORT AND FINANCIAL INCENTIVES	61
5.4 BROAD LEVEL GAP ANALYSIS TO UNDERSTAND UNTAPPED AREAS	62
5.4.1 BY TECHNOLOGY	62
5.4.2 BY END USE	62
5.5 OVERVIEW ON SUSTAINABILITY AND ENVIRONMENTAL IMPACT	. 63
5.5.1 GREENHOUSE GAS EMISSIONS AVOIDANCE	. 63
5.5.2 WATER SCARCITY AND CONSUMPTION	63
5.5.3 LAND USE AND BIODIVERSITY IMPACT	. 63
5.5.4 FIRST NATIONS LAND RIGHTS	. 63
5.5.5 GUARANTEE OF ORIGIN SCHEME	. 64
5.6 TECHNOLOGICAL ADVANCEMENTS AND INNOVATIONS	65
5.6.1 ADVANCED CATALYSTS	. 65
5.6.2 HYDROGEN STORAGE SOLUTIONS	. 65
5.6.3 DIGITAL SOLUTIONS	65
5.7 ADJACENT MARKET ANALYSIS	66
5.7.1 HYDROGEN GENERATION MARKET	66
5.7.1.1 DESCRIPTION	66
5.7.1.2 KEY PLAYERS	. 66
5.7.1.3 DRIVERS	66
5.7.1.4 RESTRAINTS	. 66
5.7.1.5 OPPORTUNITIES	66
5.7.2 HYDROGEN ENERGY STORAGE MARKET	. 67
5.7.2.1 DESCRIPTION	67
5.7.2.2 KEY PLAYERS	. 67
5.7.2.3 DRIVERS	67
5.7.2.4 RESTRAINTS	. 67
5.7.2.5 OPPORTUNITIES	67
5.8 REGULATORY FRAMEWORK	68
5.8.1 GOVERNMENTAL POLICIES	. 68
5.8.2 CERTIFICATIONS & STANDARDS	70
5.8.3 ENVIRONMENTAL CONSIDERATION	70
5.9 R&D UPDATE	71
5.9.1 CURRENT SCENARIO	71
5.9.2 FUTURE ROADMAP	. 71
5.9.2.1 EMERGING APPLICATIONS	. 71
5.9.2.2 POTENTIAL MARKET DISRUPTIONS	71
5.9.3 CHALLENGES	. 72
5.9.4 NOVEL APPLICATIONS	. 72

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.9.5 KEY DEVELOPMENTS	72
5.10 PESTEL ANALYSIS	73
5.11 GREEN HYDROGEN DEMAND IN AUSTRALIA	. 74
5.12 INVESTMENT & FUNDING OPPORTUNITIES	74
5.13 MARKET ENTRY STRATEGIES	75
5.14 RISKS & CHALLENGES	75
5.15 ENERGY TRANSITION STRATEGY	76
5.15.1 MASSIVE SCALING OF RENEWABLE GENERATION	76
5.15.2 ESTABLISHMENT OF REGIONAL HYDROGEN HUBS	. 76
5.15.3 FINANCIAL DE-RISKING VIA GOVERNMENT SUPPORT	. 76
5.15.4 CREATING DOMESTIC MARKET DEMAND	76
5.15.5 SECURING INTERNATIONAL EXPORT MARKETS	76
5.16 REGIONAL COLLABORATION AND MARKET INTEGRATION	77
5.16.1 PARTNERSHIPS WITH COUNTRIES	. 77
5.17 RISK MITIGATION AND CONTINGENCY PLANNING	78
5.17.1 FINANCIAL RISK MITIGATION: GOVERNMENT REVENUE SUPPORT	. 78
5.17.2 MARKET RISK MITIGATION: SECURING OFFTAKE AGREEMENTS	. 78
5.17.3 TECHNICAL RISK MITIGATION: INTEGRATED AND CO-LOCATED DESIGN	. 78
5.17.4 REGULATORY AND APPROVALS CONTINGENCY PLANNING	. 78
5.17.5 SOCIAL AND ENVIRONMENTAL RISK MITIGATION: EARLY ENGAGEMENT	. 79
5.18 CAPEX ANALYSIS	. 80
5.18.1 ELECTROLYZER TECHNOLOGY COSTS	. 80
5.18.2 BALANCE OF PLANT (BOP) AND INFRASTRUCTURE	. 80
5.18.3 PROJECT SCALE AND CUSTOMIZATION	80
5.18.4 TECHNOLOGICAL INNOVATION AND COST REDUCTION PATHWAYS	. 80
5.18.5 MACROECONOMIC AND POLICY INFLUENCES	80
5.19 OPEX ANALYSIS	81
5.19.1 ELECTRICITY COSTS	81
5.19.2 WATER PROCUREMENT AND TREATMENT	. 81
5.19.3 MAINTENANCE AND STACK REPLACEMENT	81
5.19.4 LABOR, OPERATIONS, AND ADMINISTRATION	81
5.19.5 INSURANCE, PERMITS, AND COMPLIANCE COSTS	. 81
5.19.6 GRID FEES AND TRANSMISSION CHARGES	81
5.19.7 POLICY SUPPORT AND OPEX INCENTIVES	. 82
5.20 COST STRUCTURE ANALYSIS	83
5.21 ROI ANALYSIS	. 84
6 AUSTRALIA GREEN HYDROGEN MARKET, BY TECHNOLOGY	86
6.1 INTRODUCTION	86
6.2 ALKALINE ELECTROLYZER	. 86
6.3 PROTON EXCHANGE MEMBRANE ELECTROLYZER	86
6.4 SOLID OXIDE ELECTROLYZER	. 86
6.5 ANION EXCHANGE MEMBRANE (AEM) ELECTROLYZER	. 87
7 AUSTRALIA GREEN HYDROGEN MARKET, BY LOCATION	88
7.1 INTRODUCTION	88
7.2 ONSHORE	88
7.3 OFFSHORE	88
8 AUSTRALIA GREEN HYDROGEN MARKET, BY END USE	90

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8.1 INTRODUCTION	90
8.2 POWER GENERATION	. 90
8.3 TRANSPORT	. 90
8.4 HEATING	. 90
8.5 INDUSTRY	. 91
8.5.1 CHEMICAL	. 91
8.5.2 STEEL	. 91
8.5.3 REFINERIES	. 91
8.5.4 OTHERS	91
9 COMPETITIVE LANDSCAPE	. 94
9.1 INTRODUCTION	94
9.2 MARKET SHARE% ANALYSIS 2024	. 94
9.3 COMPETITIVE BENCHMARKING	95
9.4 COMPARATIVE ANALYSIS: KEY PLAYERS FINANCIAL	95
9.5 KEY DEVELOPMENTS & GROWTH STRATEGIES	96
9.5.1 APPROVAL, PARTNERSHIP, INNOVATION, DEMONSTRATION AND COLLABORATION	. 96
10 COMPANY PROFILE	101
10.1 LINE HYDROGEN	. 101
10.1.1 COMPANY OVERVIEW	. 101
10.1.2 FINANCIAL OVERVIEW	102
10.1.3 PRODUCTS OFFERED	102
10.1.4 KEY DEVELOPMENTS	102
10.1.5 SWOT ANALYSIS	. 103
10.1.6 KEY STRATEGY	103
10.2 PURE HYDROGEN	104
10.2.1 COMPANY OVERVIEW	. 104
10.2.2 FINANCIAL OVERVIEW	105
10.2.3 PRODUCTS OFFERED	105
10.2.4 KEY DEVELOPMENTS	105
10.2.5 SWOT ANALYSIS	. 106
10.2.6 KEY STRATEGY	106
10.3 H2EC (H2 ENERGY COMPANY)	. 107
10.3.1 COMPANY OVERVIEW	107
10.3.2 FINANCIAL OVERVIEW	108
10.3.3 PRODUCTS OFFERED	. 108
10.3.4 KEY DEVELOPMENTS	108
10.3.5 SWOT ANALYSIS	109
10.3.6 KEY STRATEGY	109
10.4 HYDGENE RENEWABLES	. 110
10.4.1 COMPANY OVERVIEW	. 110
10.4.2 FINANCIAL OVERVIEW	111
10.4.3 PRODUCTS OFFERED	111
10.4.4 KEY DEVELOPMENTS	111
10.4.5 SWOT ANALYSIS	. 112
10.4.6 KEY STRATEGY	112
10.5 EDIFY ENERGY	. 113
10.5.1 COMPANY OVERVIEW	. 113

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.5.2 FINANCIAL OVERVIEW	114
10.5.3 PRODUCTS OFFERED	114
10.5.4 KEY DEVELOPMENTS	114
10.5.5 SWOT ANALYSIS	. 115
10.5.6 KEY STRATEGY	115
10.6 HYDROGEN FUELS AUSTRALIA	. 116
10.6.1 COMPANY OVERVIEW	. 116
10.6.2 FINANCIAL OVERVIEW	117
10.6.3 PRODUCTS OFFERED	117
10.6.4 KEY DEVELOPMENTS	117
10.6.5 SWOT ANALYSIS	. 118
10.6.6 KEY STRATEGY	118
10.7 ENERGYS	. 119
10.7.1 COMPANY OVERVIEW	. 119
10.7.2 FINANCIAL OVERVIEW	120
10.7.3 PRODUCTS OFFERED	120
10.7.4 KEY DEVELOPMENTS	120
10.7.5 SWOT ANALYSIS	. 121
10.7.6 KEY STRATEGY	121
10.8 IBERDROLA	. 122
10.8.1 COMPANY OVERVIEW	. 122
10.8.2 FINANCIAL OVERVIEW	123
10.8.3 PRODUCTS OFFERED	123
10.8.4 KEY DEVELOPMENTS	123
10.8.5 SWOT ANALYSIS	. 124
10.8.6 KEY STRATEGY	124
10.9 ABEL ENERGY	125
10.9.1 COMPANY OVERVIEW	. 125
10.9.2 FINANCIAL OVERVIEW	126
10.9.3 PRODUCTS OFFERED	126
10.9.4 KEY DEVELOPMENTS	126
10.9.5 SWOT ANALYSIS	. 127
10.9.6 KEY STRATEGY	127
10.10 SPARC HYDROGEN	128
10.10.1 COMPANY OVERVIEW	. 128
10.10.2 FINANCIAL OVERVIEW	129
10.10.3 PRODUCTS OFFERED	129
10.10.4 KEY DEVELOPMENTS	129
10.10.5 SWOT ANALYSIS	. 130
10.10.6 KEY STRATEGY	130
10.11 DATA CITATIONS	131

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Australia Green Hydrogen Market Research Report by Technology [Alkaline Electrolyzer, Proton Exchange Membrane Electrolyzer, Solid Oxide Electrolyzer, Anion Exchange Membrane (AEM) Electrolyzer], by Location (Onshore, Offshore), by End-Use [Power Generation, Transport, Heating, Industry (Chemical, Steel, Refineries, Others)] Forecast till 2035

Market Report | 2025-11-12 | 133 pages | Market Research Future

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
<input type="checkbox"/>	Single User Price	\$2950.00
<input type="checkbox"/>	Enterprisewide Price	\$3950.00
		\$5250.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Address*

City*

Zip Code*

Country*

Date

2026-03-02

Signature

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com