

Cell to Pack Battery Market by Form (Prismatic, Pouch, Cylindrical), Battery Type (LFP, NMC), Propulsion (BEV, PHEV), Technology (Blade, LiSER), Vehicle Type (Passenger Cars, Commercial Vehicles) and Region - Global Forecast to 2030

Market Report | 2023-02-10 | 252 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The cell to pack battery market is projected to grow from USD 5.5 billion in 2023 to USD 29.3 billion by 2030 at a CAGR of 26.9%. The growth of this market is mainly driven by the increasing demand for high-voltage batteries to achieve a longer drive range. CTP battery is one of the results of such advancement, which eliminates the usage of modules and directly integrates cells into battery packs. This allows the use of larger and more cells within battery packs with reduced interconnections and a simplified assembly process resulting in an increased volumetric density of batteries and reduced cost. CTP technology is yet to be commercially launched in most EV-dominating countries. It is expected to gain traction by 2024?2025 in the US, South Korea, Japan, and European countries.

"Passenger electric vehicles is the largest market for cell to pack battery."

The demand for electric passenger cars has increased in the past few years owing to the rising demand for safer personal commutes in inter-city and cross-country travel. Asia Pacific is predicted to be the largest market for the sale of passenger electric cars, with China being the major contributor in the region. Demand for electric passenger cars in Europe and North America has also grown due to rising fuel prices and increasing awareness for decarbonized vehicles. Some electric passenger car models offer an average driving range of 500-600 km, but these are higher-ranged electric passenger cars. Cell to pack batteries would help to equip economical electric passenger cars with high energy density at lower cost and reduced weight.

Further, cell to pack battery technology will support the noteworthy developments undertaken by electric vehicle manufacturers in high-voltage battery areas for the passenger cars segment to improve vehicle range and reduce charging time. For instance, Hyundai and Kia have introduced high-speed 800V architecture for upcoming passenger vehicles. Porsche has an EV model Taycan which supports an 800 V battery architecture. Other OEMs have also announced using cell to pack batteries in upcoming

models. In December 2021, Toyota Motor Corporation partnered with BYD Company Ltd. to build an electric car with a blade battery. In October 2021, Hyundai MOBIS (South Korea) entered a partnership with CATL, wherein CATL would supply the cell-to-pack battery technology to Hyundai MOBIS. This will likely bring some EV models to South Korea from 2023?2024 onwards. Further, a few Chinese OEMs - BYD Company Ltd., Neta, Xpeng Inc., etc. have either expanded or planned to expand with electric passenger car models in other parts of the world. All of these factors will help to dominate the passenger vehicle segment for cell to pack battery market

"Lithium iron phosphate chemistry to hold the largest share in the cell to pack battery."

Lithium iron phosphate (LFP) battery chemistry (a form of Lithium-ion battery) is also the most preferred choice among other chemistry for cell to pack battery technology. LFP batteries offer numerous advantages such as lightweight, lower cost, enhanced discharge, charge efficiency, durability, longer life span, minimal maintenance, and optimized safety, among others. Owing to these benefits, >90% of batteries developed with the cell to pack technology use LFP chemistry across all-electric vehicles. In October 2021, Tesla declared that it would completely switch to LFP batteries in all its models owing to lower cost and easy production process rather than using NCA batteries for increasing the range of its vehicles. Currently, Tesla has adopted the use of LFP batteries in its best-selling models like Model 3 and Model Y. Apart from passenger cars, LFP has also been used in electric buses due to its lower costs and high voltage bearing feature. Thus, these factors and the need for an optimized energy density range would drive the LFP batteries' demand for CTP technology over the coming years.

Europe is speculated to be the fastest-growing market for cell to pack battery

Europe is anticipated to grow at the fastest rate for cell to pack battery market by 2030. Europe is witnessing significant expansion in the micro-cars segment owing to factors such as the stringent carbon emission mandate, incentive boost by green recovery funds, viable charging infrastructure, and intense promotion of electric and plug-in hybrid vehicles. The market demand for cell to pack batteries will be initially driven by the entry of foreign OEMs with vehicles equipped with this technology. For instance, BYD Tang, Han EV, and Atto 3 are offered in some European countries, including Norway, Germany, Sweden, and the UK. Tesla sells Model 3 and Model Y in Europe and is expected to deploy cell to pack batteries in these models in the coming years as it has started deploying these CTP batteries in China. Further, some electric commercial vehicle manufacturers (Solaris Bus & Coach sp. z o.o., VDL Bus & Coach BV) have partnered with Chinese battery supplier- CATL to receive cell to pack batteries in electric buses. However, the Russia-Ukraine crisis has disrupted the supply chain for batteries and other raw material supplies for electric vehicles and also affected EV sales to some extent. The situation is anticipated to recover in the coming years, thereby fueling the demand for cell to pack batteries in the years to come.

In-depth interviews were conducted with CEOs, marketing directors, other innovation and strategy directors, and executives from various key organizations operating in this market.

- By Stakeholders: Demand Side 20% and Supply Side 80%
- By Designation: C Level Executives 10%, Directors 30%, and Others 60%
- By Region: Europe 10%, North America 10%, and Others 80%

Contemporary Amperex Technology Co., Limited. (China), BYD Company Ltd. (China), LG Energy Solution. (South Korea), Tesla (US), XPENG INC. (China), C4V (US), and Sunwoda Electronic Co., Ltd. (China) are the leading supplier of cell to pack battery in the global market.

Research Coverage:

The cell to pack battery market is segmented By Form (Prismatic, Pouch, Cylindrical), Battery Type [Lithium Iron Phosphate (LFP), Nickel Manganese Cobalt (NMC), Other Battery Types], Propulsion (BEV, PHEV), Technology (Blade Battery Technology, LiSER Battery Technology, Other Battery Technology), Electric Vehicle Type [Electric Passenger Cars, Electric Commercial Vehicles (Buses and Trucks)], and Region (Asia Pacific, Europe, and North America).

The study also includes an in-depth competitive analysis of the major cell to pack battery manufacturers in the market, their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

Scotts International, EU Vat number: PL 6772247784

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

Key Benefits of Buying the Report:

The report will help the market leaders with information on the closest approximations of the revenue numbers for the overall cell to pack battery market and the sub-segments. This report covers technological trends like improved battery designs and battery chemistry, the development of new cell to chassis battery technology about cell to pack battery market, which would help the stakeholders to understand more about the battery technology advancements in the industry. This report would help stakeholders understand the fastest growing market that is Europe, and the largest market that is Asia Pacific, for cell to pack batteries at regional and global levels and the factors influencing the growth of these regions. This report will help stakeholders to understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market's pulse and provides information on key market drivers, restraints, challenges, and opportunities.

Table of Contents:

1□INTRODUCTION□33

- 1.1□STUDY OBJECTIVES□33
- 1.2 MARKET DEFINITION 33
- 1.3 | INCLUSIONS & EXCLUSIONS | 34
- 1.4 STUDY SCOPE 35

FIGURE 1 MARKET SEGMENTATION: CELL TO PACK BATTERY MARKET 35

1.4.1 REGIONAL SCOPE 35

FIGURE 2∏CELL TO PACK BATTERY MARKET: REGIONAL SCOPE∏35

1.4.2 YEARS CONSIDERED 36

1.5 CURRENCY CONSIDERED 36

TABLE 1 CURRENCY EXCHANGE RATES 36

1.6 LIMITATIONS 37

1.7 STAKEHOLDERS 37

2 RESEARCH METHODOLOGY 38

2.1 RESEARCH DATA 38

FIGURE 3□RESEARCH DESIGN□38

FIGURE 4 RESEARCH METHODOLOGY MODEL 39

- 2.1.1 SECONDARY DATA 40
- 2.1.1.1 Key data from secondary sources 40
- 2.1.1.2 Key data from secondary sources 41
- 2.1.2 PRIMARY DATA 142

FIGURE 5 BREAKDOWN OF PRIMARY INTERVIEWS: BY STAKEHOLDER, DESIGNATION, AND REGION 42

- 2.1.2.1 Breakdown of primary interviews 43
- 2.2 MARKET ESTIMATION METHODOLOGY 43

FIGURE 6 RESEARCH METHODOLOGY: HYPOTHESIS BUILDING 44

- 2.2.1 RECESSION IMPACT ANALYSIS 45
- 2.3 MARKET SIZE ESTIMATION 45
- 2.3.1 BOTTOM-UP APPROACH 45

FIGURE 7 CELL TO PACK BATTERY MARKET, BY VEHICLE TYPE: BOTTOM-UP APPROACH 46

2.3.2 TOP-DOWN APPROACH 46

FIGURE 8 CELL TO PACK BATTERY MARKET, BY BATTERY TYPE: TOP-DOWN APPROACH 46

- 2.3.3 FACTOR ANALYSIS FOR MARKET SIZING: DEMAND AND SUPPLY SIDE 47
- 2.4□FACTOR ANALYSIS□47
- 2.5 DATA TRIANGULATION 48

FIGURE 9 DATA TRIANGULATION METHODOLOGY 48

Scotts International, EU Vat number: PL 6772247784

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

- 2.6 RESEARCH ASSUMPTIONS 149
- 2.7 RISK ASSESSMENT 50
- 2.8 RESEARCH LIMITATIONS 52

3 EXECUTIVE SUMMARY 53

- 3.1□INTRODUCTION□53
- 3.1.1 □ PRE VS. POST-RECESSION SCENARIO □ 53

FIGURE 10 PRE VS. POST-RECESSION SCENARIO: CELL TO PACK BATTERY MARKET SIZE, 2020?2030 (USD MILLION) 53

TABLE 2 PRE VS. POST-RECESSION SCENARIO: CELL TO PACK BATTERY MARKET, 2020-2030 (USD MILLION) 54

3.1.2 REPORT SUMMARY 55

FIGURE 11 CELL TO PACK BATTERY MARKET, BY REGION, 2023 VS. 2030 (USD MILLION) 55

4∏PREMIUM INSIGHTS∏58

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN CELL TO PACK BATTERY MARKET 58

FIGURE 12∏RISING DEMAND FOR HIGH ENERGY DENSITY BATTERIES TO DRIVE MARKET GROWTH∏58

4.2 CELL TO PACK BATTERY MARKET, BY REGION 59

FIGURE 13 ASIA PACIFIC TO LEAD MARKET DURING FORECAST PERIOD 59

4.3□CELL TO PACK BATTERY MARKET, BY BATTERY FORM□59

FIGURE 14 | PRISMATIC FORM SEGMENT PREDICTED TO DOMINATE MARKET DURING FORECAST PERIOD | 59

4.4□CELL TO PACK BATTERY MARKET, BY BATTERY TYPE□60

FIGURE 15 LITHIUM IRON PHOSPHATE SEGMENT TO HOLD LARGEST SHARE FOR CELL TO PACK BATTERY MARKET 60

4.5 CELL TO PACK BATTERY MARKET, BY PROPULSION 60

FIGURE 16 BEVS SEGMENT PROJECTED TO SECURE LARGEST MARKET SHARE DURING FORECAST PERIOD 60

4.6□CELL TO PACK BATTERY MARKET, BY TECHNOLOGY□61

FIGURE 17 BLADE BATTERY TECHNOLOGY SEGMENT TO DOMINATE MARKET DURING FORECAST PERIOD 61

4.7 CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE 161

FIGURE 18 PASSENGER CARS SEGMENT TO SECURE LARGEST MARKET SHARE DURING FORECAST PERIOD 61

5∏MARKET OVERVIEW∏62

5.1□INTRODUCTION□62

5.2 MARKET DYNAMICS 63

FIGURE 19 CELL TO PACK BATTERY: MARKET DYNAMICS 63

5.2.1 □ DRIVERS □ 63

5.2.1.1 Increase in EV demand 63

FIGURE 20 DEV BATTERY MARKET, BY MATERIAL TYPE, 2022 VS 2027 64

5.2.1.2 Growing technological advancements in batteries 64

5.2.2 RESTRAINTS 65

5.2.2.1 Limiting use of electric vehicles 65

5.2.3 OPPORTUNITIES 65

5.2.3.1 | Electrification of commercial vehicles | 65

FIGURE 21 | ELECTRIC BUSES MARKET, BY REGION, 2018-2021 | 66

FIGURE 22 ELECTRIC TRUCKS MARKET, BY REGION, 2019-2021 66

5.2.4∏CHALLENGES∏67

5.2.4.1 Battery design and initial costs 67

5.2.4.2 Safety concerns due to battery thermal management 67

5.3 PORTER'S FIVE FORCES ANALYSIS ☐ 68

TABLE 3 PORTER'S FIVE FORCES ANALYSIS 68

FIGURE 23 PORTER'S FIVE FORCES ANALYSIS 68

5.3.1 THREAT OF NEW ENTRANTS 69

5.3.2 THREAT OF SUBSTITUTES 69

Scotts International, EU Vat number: PL 6772247784

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

www.scotts-international.com

- 5.3.3 BARGAINING POWER OF SUPPLIERS 69
- 5.3.4 BARGAINING POWER OF BUYERS 69
- 5.3.5 INTENSITY OF COMPETITIVE RIVALRY 70
- 5.4∏IMPACT OF RECESSION ON CELL TO PACK BATTERY MARKET SCENARIO ANALYSIS∏70
- 5.4.1□INTRODUCTION□70
- 5.4.2 REGIONAL MACRO-ECONOMIC OVERVIEW 70
- 5.4.3 ANALYSIS OF KEY ECONOMIC INDICATORS 71

TABLE 4 KEY ECONOMIC INDICATORS FOR SELECT COUNTRIES, 2021?2022 71

5.4.4 ECONOMIC STAGFLATION (SLOWDOWN) VS. ECONOMIC RECESSION 72

5.4.4.1 | Europe | 72

TABLE 5∏EUROPE: KEY ECONOMIC INDICATORS, 2021?2023∏72

5.4.4.2∏Asia Pacific∏73

TABLE 6 ASIA PACIFIC: KEY ECONOMIC INDICATORS, 2021-2023 73

5.4.4.3 Americas 73

TABLE 7 AMERICAS: KEY ECONOMIC INDICATORS, 2021;2023 73

5.4.5 □ ECONOMIC OUTLOOK/PROJECTIONS □ 74

TABLE 8 GDP GROWTH PROJECTIONS FOR KEY COUNTRIES, 2024?2027 (% GROWTH) 74

5.5 IMPACT ON ELECTRIC VEHICLE SALES 75

5.5.1 ANALYSIS OF ELECTRIC VEHICLE SALES 75

5.5.1.1 | Europe | 75

FIGURE 24 EUROPE: ELECTRIC PASSENGER CARS, BEV, AND PHEV SALES, BY COUNTRY, 2021-2022 75

5.5.1.2∏Asia Pacific∏76

FIGURE 25∏ASIA PACIFIC: PASSENGER CARS, BEV AND PHEV SALES, BY COUNTRY, 2021-2022∏76

5.5.1.3 North America 77

FIGURE 26 NORTH AMERICA: PASSENGER CARS, BEVS, AND PHEVS SALES, BY COUNTRY, 2021;2022 77

5.5.2 ELECTRIC VEHICLE SALES OUTLOOK 78

FIGURE 27 PASSENGER CARS, BEVS, AND PHEVS VEHICLE SALES FORECAST, 2022 VS. 2030 (UNITS) 78

5.5.3∏IMPACT OF RECESSION ON CELL TO PACK BATTERY MARKET: SCENARIO ANALYSIS∏81

FIGURE 28 SCENARIO ANALYSIS: CELL TO PACK BATTERY MARKET SCENARIO, 2020?2030 (USD MILLION) 81

5.5.3.1 Most likely recession scenario 81

TABLE 9[CELL TO PACK BATTERY MARKET (MOST LIKELY RECESSION SCENARIO), BY REGION, 2020?2030 (USD MILLION)[82]

5.5.3.2∏High-impact recession scenario∏82

TABLE 10 CELL TO PACK BATTERY MARKET (HIGH-IMPACT RECESSION SCENARIO), BY REGION, 2020?2030 (USD MILLION) 82

5.5.3.3 Low-impact recession scenario 83

TABLE 11∏CELL TO PACK BATTERY MARKET (LOW-IMPACT RECESSION SCENARIO), BY REGION, 2020?2030 (USD MILLION)∏83

5.6 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES 84

FIGURE 29 REVENUE SHIFT DRIVING MARKET GROWTH 84

5.7 SUPPLY CHAIN ANALYSIS 85

FIGURE 30 SUPPLY CHAIN ANALYSIS: CELL TO PACK BATTERY MARKET (1/2) 85

FIGURE 31 SUPPLY CHAIN ANALYSIS: CELL TO PACK BATTERY MARKET (2/2) 86

5.8 ECOSYSTEM 87

FIGURE 32 CELL TO PACK BATTERY MARKET: ECOSYSTEM 87

FIGURE 33∏CELL TO PACK BATTERY MARKET: ECOSYSTEM ANALYSIS∏88

TABLE 12□ROLE OF COMPANIES IN CELL TO PACK BATTERY MARKET ECOSYSTEM□88

5.9 TECHNOLOGY ANALYSIS 89

5.9.1 IMPROVED BATTERY DESIGN AND COMPOSITION 89

5.9.2 CELL TO CHASSIS BATTERY TECHNOLOGY 90

Scotts International, EU Vat number: PL 6772247784

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

5.10 AVERAGE SELLING PRICE ANALYSIS 90

TABLE 13 AVERAGE SELLING PRICE, BY REGION 90

TABLE 14□AVERAGE SELLING PRICE, BY BATTERY FORM□90

5.11 CELL TO PACK BATTERY MARKET: PATENT ANALYSIS, 2019?2022 91

TABLE 15 PATENT ANALYSIS 2019?2022 91

5.12 REGULATORY LANDSCAPE 194

5.12.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 94

5.12.1.1 North America: List of regulatory bodies, government agencies, and other organizations □94

TABLE 16 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 94

5.12.1.2 Europe: List of regulatory bodies, government agencies, and other organizations 96

TABLE 17∏EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS∏96

5.12.1.3 ∏Asia Pacific: List of regulatory bodies, government agencies, and other organizations ∏97

TABLE 18∏ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS∏97

5.12.1.4 Rest of the World: List of regulatory bodies, government agencies, and other organizations 98

TABLE 19 REST OF WORLD: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 98

5.13 CASE STUDY ANALYSIS 98

5.13.1∏USE CASE 1: DEVELOPMENT OF BLADE BATTERY BY BYD COMPANY LTD.∏98

6□CELL TO PACK BATTERY MARKET, BY BATTERY FORM□99

Note: The chapter is provided on regional level - Asia Pacific, Europe, and North America. The market size is provided in terms of volume and value

6.1∏INTRODUCTION∏100

6.1.1 RESEARCH METHODOLOGY 100

6.1.2∏ASSUMPTIONS∏100

6.1.3□INDUSTRY INSIGHTS□101

FIGURE 34 CELL TO PACK BATTERY MARKET, BY BATTERY FORM, 2023 VS. 2030 101

TABLE 20 CELL TO PACK BATTERY MARKET, BY BATTERY FORM, 2020?2022 (UNITS) 101

TABLE 21 CELL TO PACK BATTERY MARKET, BY BATTERY FORM, 2023;2030 (UNITS) 102

TABLE 22 CELL TO PACK BATTERY MARKET, BY BATTERY FORM, 2020?2022 (USD MILLION) 102

TABLE 23 \square CELL TO PACK BATTERY MARKET, BY BATTERY FORM, 2023?2030 (USD MILLION) \square 102

6.2 PRISMATIC CELLS 103

6.2.1 SIMPLE DESIGN AND HIGH-ENERGY-DENSITY CAPACITY TO BOOST MARKET 103

TABLE 24∏PRISMATIC CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏103

TABLE 25 PRISMATIC CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 103

TABLE 26 PRISMATIC CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION) 104

TABLE 27 PRISMATIC CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 104 6.3 POUCH CELLS 104

6.3.1 FLEXIBLE STRUCTURAL FEATURE TO PROMOTE SEGMENT GROWTH 104

TABLE 28∏POUCH CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏105

TABLE 29 POUCH CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 105

TABLE 30∏POUCH CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION)∏105

TABLE 31 POUCH CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 105

6.4□CYLINDRICAL CELLS□106

6.4.1 □ LESS SPACE UTILIZATION TO BOOST DEMAND □ 106

TABLE 32∏CYLINDRICAL CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏106

TABLE 33∏CYLINDRICAL CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS)∏107

TABLE 34[CYLINDRICAL CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION)[107

TABLE 35 CYLINDRICAL CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 107

Scotts International, EU Vat number: PL 6772247784

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

7 CELL TO PACK BATTERY MARKET, BY BATTERY TYPE 108

Note: The chapter is provided on regional level - Asia Pacific, Europe, and North America. The market size is provided in terms of volume and value

7.1□INTRODUCTION□109

7.1.1 RESEARCH METHODOLOGY 109

7.1.2 ASSUMPTIONS 110

7.1.3 INDUSTRY INSIGHTS 110

FIGURE 35 CELL TO PACK BATTERY MARKET, BY BATTERY TYPE, 2023 VS. 2030 (USD MILLION) 110

TABLE 36 CELL TO PACK BATTERY MARKET, BY BATTERY TYPE, 2020?2022 (UNITS) 111

TABLE 37 CELL TO PACK BATTERY MARKET, BY BATTERY TYPE, 2023?2030 (UNITS) 111

TABLE 38∏CELL TO PACK BATTERY MARKET, BY BATTERY TYPE, 2020?2022 (USD MILLION)∏111

TABLE 39∏CELL TO PACK BATTERY MARKET, BY BATTERY TYPE, 2023?2030 (USD MILLION)∏112

7.2 LITHIUM IRON PHOSPHATE BATTERIES (LFP) 112

7.2.1 LOW-COST FEATURE TO BENEFIT SEGMENT 112

TABLE 40∏LFP: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏112

TABLE 41 LFP: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 113

TABLE 42∏LFP: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION)∏113

TABLE 43 LFP: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 113

7.3 NICKEL MANGANESE COBALT BATTERIES (NMC) 114

7.3.1 HIGHER ENERGY DENSITY TO STRENGTHEN SEGMENTAL GROWTH 114

TABLE 44 NMC: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 114

TABLE 45 NMC: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 114

TABLE 46 NMC: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION) 115

TABLE 47 NMC: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 115

7.4 OTHER BATTERY TYPES 115

7.4.1 NEED TO REDUCE DEPENDENCY ON LFP BATTERIES TO PROMOTE SEGMENT EXPANSION 115

TABLE 48∏OTHER BATTERY TYPES: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏116

TABLE 49∏OTHER BATTERY TYPES: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS)∏116

TABLE 50□OTHER BATTERY TYPES: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION)□116

TABLE 51∏OTHER BATTERY TYPES: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION)∏117

8 CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE 118

Note: The chapter is on regional level - Asia Pacific, Europe, and North America. The market size is provided in terms of volume and value

8.1□INTRODUCTION□119

8.1.1 RESEARCH METHODOLOGY 119

8.1.2 ASSUMPTIONS 119

8.1.3□INDUSTRY INSIGHTS□120

FIGURE 36∏CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023 VS. 2030 (USD MILLION)∏120

TABLE 52 CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2020?2022 (UNITS) 120

TABLE 53 CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (UNITS) 121

TABLE 54 \square CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2020?2022 (USD MILLION) \square 121

TABLE 55[CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (USD MILLION)[121

8.2 ELECTRIC PASSENGER CARS 122

8.2.1 RISING DEMAND FOR LONG-RANGE AND LIGHTWEIGHT BATTERIES TO DRIVE SEGMENT GROWTH 122

TABLE 56 ELECTRIC PASSENGER CARS: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 122

TABLE 57 ELECTRIC PASSENGER CARS: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 122

Scotts International, EU Vat number: PL 6772247784

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

TABLE 58 ELECTRIC PASSENGER CARS: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION) 123 TABLE 59 ELECTRIC PASSENGER CARS: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 123 8.3 ELECTRIC BUSES 123

8.3.1□GROWING TREND OF ELECTRIFICATION OF PUBLIC TRANSPORT BUSES TO DRIVE DEMAND FOR HIGH-ENERGY-DENSITY BATTERIES□123

TABLE 60 ELECTRIC BUSES: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 124

TABLE 61 ELECTRIC BUSES: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 124

TABLE 62 ELECTRIC BUSES: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION) 124

TABLE 63 \square ELECTRIC BUSES: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) \square 125

8.4∏ELECTRIC TRUCKS∏125

8.4.1 ⊓RISING TREND FOR ELECTRIFICATION OF TRUCKS TO CREATE OPPORTUNITIES FOR MARKET 125

TABLE 64∏ELECTRIC TRUCKS: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS)∏125

TABLE 65⊓ELECTRIC TRUCKS: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS)⊓126

TABLE 66∏ELECTRIC TRUCKS: CELL TO PACK BATTERY MARKET, BY REGION, 2020-2022 (USD MILLION)∏126

TABLE 67∏ELECTRIC TRUCKS: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION)∏126

9∏CELL TO PACK BATTERY MARKET, BY PROPULSION∏127

Note: The chapter is provided on regional level - Asia Pacific, Europe, and North America. The market size is provided in terms of volume and value

9.1 INTRODUCTION 128

9.1.1 RESEARCH METHODOLOGY 128

9.1.2∏ASSUMPTIONS∏129

9.1.3 INDUSTRY INSIGHTS 129

FIGURE 37 CELL TO PACK BATTERY MARKET, BY PROPULSION, 2023 VS. 2030 (USD MILLION) 129

TABLE 68 CELL TO PACK BATTERY MARKET, BY PROPULSION, 2020?2022 (UNITS) 129

TABLE 69 CELL TO PACK BATTERY MARKET, BY PROPULSION, 2023?2030 (UNITS) 130

TABLE 70 CELL TO PACK BATTERY MARKET, BY PROPULSION, 2020?2022 (USD MILLION) 130

TABLE 71∏CELL TO PACK BATTERY MARKET, BY PROPULSION, 2023?2030 (USD MILLION)∏130

9.2 BATTERY ELECTRIC VEHICLES (BEVS) 131

9.2.1 TRISING DEMAND FOR LIGHTWEIGHT, COST-EFFICIENT, AND HIGH-ENERGY-DENSITY BATTERIES TO DRIVE MARKET 131

TABLE 72 BATTERY ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 131

TABLE 73□BATTERY ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS)□131

TABLE 74∏BATTERY ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION)∏132

TABLE 75 BATTERY ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) 132

9.3 PLUG-IN HYBRID ELECTRIC VEHICLES (PHEVS) 132

9.3.1 INCREASE IN PHEV DEMAND TO SUPPORT MARKET GROWTH 132

TABLE 76∏PLUG-IN HYBRID ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2020-2022 (UNITS)∏133

TABLE 77 PLUG-IN HYBRID ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 133

TABLE 78 PLUG-IN HYBRID ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2020;2022 (USD MILLION) 133

TABLE 79 \square PLUG-IN HYBRID ELECTRIC VEHICLE: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) \square 134

10 CELL TO PACK BATTERY MARKET, BY TECHNOLOGY 135

Note: The chapter is provided on regional level - Asia Pacific, Europe, and North America. The market size is provided in terms of volume

10.1∏INTRODUCTION∏136

10.1.1 RESEARCH METHODOLOGY 136

10.1.2 ASSUMPTIONS 136

10.1.3 \square INDUSTRY INSIGHTS \square 137

FIGURE 38 CELL TO PACK BATTERY MARKET, BY TECHNOLOGY, 2023 VS. 2030 (THOUSAND UNITS) 137

Scotts International, EU Vat number: PL 6772247784

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

TABLE 80 CELL TO PACK BATTERY MARKET, BY BATTERY TECHNOLOGY, 2020?2022 (UNITS) 137 TABLE 81 CELL TO PACK BATTERY MARKET, BY BATTERY TECHNOLOGY, 2023?2030 (UNITS) 138 10.2 BATTERY 138

10.2.1 ☐ HIGHER VCTPR AND GCTPR OF BLADE BATTERIES TO SUPPORT GROWTH ☐ 138

TABLE 82 BLADE BATTERY: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 139

TABLE 83 BLADE BATTERY: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 10.3 LISER BATTERY 139

10.3.1 □ 100% NICKEL AND COBALT-FREE FEATURE TO DRIVE SEGMENTAL GROWTH □ 139

TABLE 84 LISER BATTERY: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 140

TABLE 85 LISER BATTERY: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 140

10.4∏OTHER BATTERY TECHNOLOGIES∏141

10.4.1 ☐ HIGH COMPETITION IN EV BATTERY MARKET TO DRIVE DEMAND ☐ 141

TABLE 86 OTHER BATTERY TECHNOLOGIES: CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 141

TABLE 87∏OTHER BATTERY TECHNOLOGIES: CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS)∏141

11□CELL TO PACK BATTERY MARKET, BY REGION□142

Note: The chapter is provided by vehicle type at country level - Asia Pacific (China, India, Japan, South Korea), Europe (France, Germany, Norway, The Netherlands, Switzerland, Spain, Sweden, UK, and Europe Others) and North America (US and Canada). The market size is provided in terms of volume and value

11.1 INTRODUCTION 143

11.1.1 ⊓RESEARCH METHODOLOGY П143

11.1.2 ASSUMPTIONS 144

11.1.3 INDUSTRY INSIGHTS 144

FIGURE 39∏CELL TO PACK BATTERY MARKET, BY REGION, 2023 VS. 2030 (USD MILLION)∏144

TABLE 88 CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (UNITS) 145

TABLE 89 CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (UNITS) 145

TABLE 90 CELL TO PACK BATTERY MARKET, BY REGION, 2020?2022 (USD MILLION) 145

TABLE 91 \square CELL TO PACK BATTERY MARKET, BY REGION, 2023?2030 (USD MILLION) \square 145

11.2□ASIA PACIFIC□146

FIGURE 40 ASIA PACIFIC: CELL TO PACK BATTERY MARKET SNAPSHOT 147

TABLE 92 ASIA PACIFIC: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (UNITS) 147

TABLE 93 ASIA PACIFIC: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (UNITS) 148

TABLE 94∏ASIA PACIFIC: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (USD MILLION)∏148

TABLE 95

ASIA PACIFIC: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (USD MILLION)

148

11.2.1 CHINA 149

11.2.1.1 Rising EV demand and increasing technological advancement for improved battery performance 149

TABLE 96 CHINA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 149

TABLE 97 CHINA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 149

TABLE 98 CHINA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 150

TABLE 99 TCHINA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 150

11.2.2 JAPAN 150

11.2.2.1 Regional EV OEMs partnering with battery suppliers to use advanced battery solutions 150

TABLE 100 DAPAN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 151

TABLE 101 DAPAN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 151

TABLE 102 JAPAN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 151

TABLE 103 APAN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 152

11.2.3 | INDIA | | 152

11.2.3.1 Government subsidies and incentives to drive market ☐ 152

Scotts International, EU Vat number: PL 6772247784

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

```
TABLE 104 INDIA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 153
TABLE 105 INDIA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 153
TABLE 106 INDIA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 153
TABLE 107 INDIA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023-2030 (USD MILLION) 154
11.2.4 SOUTH KOREA 154
11.2.4.1 Increasing focus on sustainable electric mobility to boost market 154
TABLE 108 SOUTH KOREA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 154
TABLE 109 SOUTH KOREA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 155
```

TABLE 110□SOUTH KOREA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION)□155 TABLE 111□SOUTH KOREA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION)□155

FIGURE 41 TEUROPE: CELL TO PACK BATTERY MARKET SNAPSHOT 157

TABLE 112 EUROPE: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (UNITS) 158

TABLE 113 EUROPE: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (UNITS) 158

TABLE 114 EUROPE: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (USD MILLION) 159

TABLE 115 EUROPE: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (USD MILLION) 159

11.3.1 | FRANCE | 160

11.3 | EUROPE | 156

11.3.1.1 Rise in e-logistics transport to drive market 160

TABLE 116 FRANCE: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 160
TABLE 117 FRANCE: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 160
TABLE 118 FRANCE: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 161
TABLE 119 FRANCE: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 161
11.3.2 GERMANY 161

11.3.2.1 Presence of leading companies and higher demand for BEVs to benefit market 161

TABLE 120 GERMANY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 162
TABLE 121 GERMANY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 162
TABLE 122 GERMANY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 162
TABLE 123 GERMANY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 163
11.3.3 NORWAY 163

 $11.3.3.1 \verb|| Replacement of conventional vehicles with advanced EVs to drive market \verb||| 163$

TABLE 124 NORWAY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 164
TABLE 125 NORWAY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (UNITS) 164
TABLE 126 NORWAY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 164
TABLE 127 NORWAY: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 165
11.3.4 SWITZERLAND 165

11.3.4.1 Rapid adoption of EVs to create demand for high energy density batteries to boost market 165
TABLE 128 SWITZERLAND: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 165
TABLE 129 SWITZERLAND: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 166
TABLE 130 SWITZERLAND: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 166
TABLE 131 SWITZERLAND: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 166
11.3.5 NETHERLANDS 167

11.3.5.1 Rising focus on enhanced battery technology in commercial vehicles to strengthen market 167

TABLE 132 NETHERLANDS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 167

TABLE 133 NETHERLANDS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 167

TABLE 134 NETHERLANDS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2020?2022 (USD MILLION) 168

TABLE 135 NETHERLANDS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 168

11.3.6 PAIN 168

Scotts International, EU Vat number: PL 6772247784

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

```
11.3.6.1 Rising domestic battery cell production to offer opportunities 168
```

TABLE 136 SPAIN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 169

TABLE 137∏SPAIN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS)∏169

TABLE 138 SPAIN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 169

TABLE 139 SPAIN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 170

11.3.7 SWEDEN 170

11.3.7.1 Presence of OEMs to boost demand for EV batteries 170

TABLE 140 SWEDEN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 170

TABLE 141 SWEDEN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 171

TABLE 142 SWEDEN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 171

TABLE 143□SWEDEN: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION)□171 11.3.8□UK□172

11.3.8.1∏Increasing presence of international EV manufacturers to augment market size∏172

TABLE 144 UK: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 172

TABLE 145 UK: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (UNITS) 172

TABLE 146∏UK: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION)∏173

TABLE 147 UK: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (USD MILLION) 11.3.9 EUROPE OTHERS 173

TABLE 148 EUROPE OTHERS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 174

TABLE 149 EUROPE OTHERS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 174

TABLE 150 EUROPE OTHERS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) 174

TABLE 151 EUROPE OTHERS: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 11.4 NORTH AMERICA 175

FIGURE 42□NORTH AMERICA: CELL TO PACK BATTERY MARKET, BY REGION, 2023 VS. 2030 (USD MILLION)□176

TABLE 152 NORTH AMERICA: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (UNITS) 176

TABLE 153∏NORTH AMERICA: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (UNITS)∏176

TABLE 154 NORTH AMERICA: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2020?2022 (USD MILLION) 177

TABLE 155 NORTH AMERICA: CELL TO PACK BATTERY MARKET, BY COUNTRY, 2023?2030 (USD MILLION) 11.4.1 USD 177

11.4.1.1 Growing demand for electric SUVs to drive market 177

TABLE 156 US: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 178

TABLE 157∏US: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS)∏178

TABLE 158 TUS: CELL TO PACK BATTERY MARKET. BY ELECTRIC VEHICLE. 2020;2022 (USD MILLION) T178

TABLE 159 \square US: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE TYPE, 2023?2030 (USD MILLION) \square 179

11.4.2 CANADA 179

11.4.2.1 Government subsidies to promote EVs to drive market 179

TABLE 160 CANADA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (UNITS) 179

TABLE 161 CANADA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (UNITS) 180

TABLE 162 \square CANADA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2020?2022 (USD MILLION) \square 180

TABLE 163 CANADA: CELL TO PACK BATTERY MARKET, BY ELECTRIC VEHICLE, 2023?2030 (USD MILLION) 180

12 \square RECOMMENDATIONS BY MARKETSANDMARKETS \square 181

12.1 \square ADVANCEMENT IN BATTERY PACKS TO DRIVE CELL TO PACK BATTERY DEMAND \square 181

12.2 DEMAND FOR EFFICIENT AND LOW-COST BATTERY CHEMISTRY TO DRIVE MARKET 182

12.3 CONCLUSION 182

13 COMPETITIVE LANDSCAPE 183

 $13.1 \square OVERVIEW \square 183$

13.2 CELL TO PACK BATTERY MARKET RANKING, 2022 183

Scotts International. EU Vat number: PL 6772247784

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

FIGURE 43 CELL TO PACK BATTERY MARKET RANKING, 2022 183

13.3 REVENUE ANALYSIS OF TOP FIVE PLAYERS 185

FIGURE 44 CELL TO PACK BATTERY MARKET, REVENUE ANALYSIS 185

13.4 COMPANY EVALUATION QUADRANT 185

13.4.1 TERMINOLOGY 185

13.4.2 | STARS | 186

13.4.3 PERVASIVE PLAYERS 186

13.4.4∏EMERGING LEADERS∏186

13.4.5 PARTICIPANTS 186

FIGURE 45 CELL TO PACK BATTERY MARKET COMPETITIVE LEADERSHIP MAPPING, 2022 187

13.5 CELL TO PACK BATTERY MARKET: COMPANY FOOTPRINT 188

TABLE 164 CELL TO PACK BATTERY MARKET: COMPANY FOOTPRINT ANALYSIS, 2022 188

TABLE 165 CELL TO PACK BATTERY MARKET: COMPANY PRODUCT CATEGORY FOOTPRINT, 2022 189

TABLE 166 CELL TO PACK BATTERY MARKET: COMPANY REGION FOOTPRINT, 2022 190

13.6 COMPETITIVE BENCHMARKING 191

TABLE 167 CELL TO PACK BATTERY MARKET: KEY SMES 191

TABLE 168 CELL TO PACK BATTERY MARKET: COMPETITIVE BENCHMARKING OF KEY PLAYERS [SMES] 192

13.7 COMPETITIVE SCENARIO 193
13.7.1 PRODUCT LAUNCHES 193

TABLE 169 PRODUCT LAUNCHES, 2019?2022 193

13.7.2 DEALS 194

TABLE 170 DEALS, 2020?2022 194

13.7.3 | OTHERS | 200

TABLE 171 OTHERS, 2020?2022 200

13.8 STRATEGIES ADOPTED BY KEY PLAYERS 202

TABLE 172 OVERVIEW OF STRATEGIES DEPLOYED BY KEY CELL TO PACK BATTERY MARKET OEMS 202

14□COMPANY PROFILES□205

(Business overview, Products/Solutions/Services offered, Recent Developments, MNM view)*

14.1 KEY PLAYERS 205

14.1.1 \square CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED. \square 205

TABLE 173 CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED.: BUSINESS OVERVIEW 205

FIGURE 46 CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED.: COMPANY SNAPSHOT 206

TABLE 174[]CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED.: PRODUCT LAUNCHES[]206

TABLE 175 CONTEMPORARY AMPEREX TECHNOLOGY LIMITED.: DEALS 207

TABLE 176 CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED.: OTHERS 209

14.1.2□LG ENERGY SOLUTION.□211

TABLE 177 LG ENERGY SOLUTION.: BUSINESS OVERVIEW 211 FIGURE 47 LG ENERGY SOLUTION.: COMPANY SNAPSHOT 212 TABLE 178 LG ENERGY SOLUTION.: PRODUCT LAUNCHES 212

TABLE 179 LG ENERGY SOLUTION.: DEALS 212

14.1.3 BYD COMPANY LTD. 215

TABLE 180 BYD COMPANY LTD.: BUSINESS OVERVIEW 215 FIGURE 48 BYD COMPANY LTD.: COMPANY SNAPSHOT 216

TABLE 181 BYD COMPANY LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 216

TABLE 182 BYD COMPANY LTD.: PRODUCT LAUNCHES 217

TABLE 183[BYD COMPANY LTD.: DEALS[218 TABLE 184[BYD COMPANY LTD: OTHERS[218

Scotts International, EU Vat number: PL 6772247784

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

www.scotts-international.com

14.1.4 C4V 220

TABLE 185\(C4V: BUSINESS OVERVIEW\(\) 220 TABLE 186\(C4V: PRODUCT LAUNCHES\(221 \)

TABLE 187 C4V: DEALS 221

14.1.5 SUNWODA ELECTRONIC CO., LTD. 223

TABLE 188 SUNWODA ELECTRONIC CO., LTD.: BUSINESS OVERVIEW 223 FIGURE 49 SUNWODA ELECTRONIC CO., LTD.: COMPANY SNAPSHOT 224

TABLE 189 SUNWODA ELECTRONIC CO., LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 224

TABLE 190 SUNWODA ELECTRONIC CO., LTD.: PRODUCT LAUNCHES 225

TABLE 191\[SUNWODA ELECTRONIC CO., LTD.: DEALS\[225 \]
TABLE 192\[SUNWODA ELECTRONIC CO., LTD.: OTHERS\[226 \]

14.1.6 | TESLA | 228

TABLE 193 TESLA: BUSINESS OVERVIEW 228 FIGURE 50 TESLA: COMPANY SNAPSHOT 229

TABLE 194 TESLA: DEALS 229

14.1.7 PANASONIC HOLDINGS CORPORATION □230

TABLE 195□PANASONIC HOLDINGS CORPORATION: BUSINESS OVERVIEW□230 FIGURE 51□PANASONIC HOLDINGS CORPORATION: COMPANY SNAPSHOT□231

TABLE 196 PANASONIC HOLDINGS CORPORATION: DEALS 231
TABLE 197 PANASONIC HOLDINGS CORPORATION: OTHERS 232

14.1.8 □ ELEVENES □ 233

TABLE 198 ELEVENES: BUSINESS OVERVIEW 233

14.1.9∏ELECTRA∏234

TABLE 199 ELECTRA: BUSINESS OVERVIEW 234

TABLE 200 | ELECTRA: DEALS | 234

14.1.10 CAMELOT ELECTRONIC TECHNOLOGY CO., LTD. 235

TABLE 201 CAMELOT ELECTRONIC TECHNOLOGY CO., LTD.: BUSINESS OVERVIEW 235

TABLE 202 CAMELOT ELECTRONIC TECHNOLOGY LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 235

14.1.11 SILVER POWER SYSTEMS 236

TABLE 203 SILVER POWER SYSTEMS: BUSINESS OVERVIEW 236

14.1.12 BMW AG 237

TABLE 204 BMW AG: BUSINESS OVERVIEW 237 FIGURE 52 BMW AG: COMPANY SNAPSHOT 238

TABLE 205 BMW AG: DEALS 239 14.1.13 FORD MOTOR COMPANY 240

TABLE 206□FORD MOTOR COMPANY: BUSINESS OVERVIEW□240 FIGURE 53□FORD MOTOR COMPANY: COMPANY SNAPSHOT□241

TABLE 207 FORD MOTOR COMPANY: DEALS 241 14.1.14 SOLARIS BUS & COACH SP. Z O.O. 242

TABLE 208 SOLARIS BUS & COACH SP. Z O.O.: BUSINESS OVERVIEW 242

TABLE 209 SOLARIS BUS & COACH SP. Z O.O.: DEALS 242

14.1.15 HENKEL AG & CO. KGAA 243

TABLE 210 HENKEL AG & CO. KGAA: BUSINESS OVERVIEW 243 FIGURE 54 HENKEL AG & CO. KGAA: COMPANY SNAPSHOT 244

TABLE 211 HENKEL AG & CO. KGAA: PRODUCTS/SOLUTIONS/SERVICES OFFERED 244

TABLE 212 HENKEL AG & CO. KGAA.: DEALS 245 TABLE 213 HENKEL AG & CO. KGAA: OTHERS 245

Scotts International, EU Vat number: PL 6772247784

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

14.1.16 AZL AACHEN GMBH 246

TABLE 214 AZL AACHEN GMBH: BUSINESS OVERVIEW 246

14.1.17 XPENG INC. 247

TABLE 215 XPENG INC.: BUSINESS OVERVIEW 247 FIGURE 55 XPENG INC.: COMPANY SNAPSHOT 248

TABLE 216 XPENG INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 248

TABLE 217 XPENG INC.: PRODUCT LAUNCHES 249

TABLE 218 XPENG INC.: OTHERS 249

14.1.18 NIO 250

TABLE 219 NIO: BUSINESS OVERVIEW 250
FIGURE 56 NIO.: COMPANY SNAPSHOT 251
TABLE 220 NIO INC.: PRODUCT LAUNCHES 251

14.1.19 \rightarrow VDL BUS & COACH BV \rightarrow 252

TABLE 221 | VDL BUS & COACH BV: BUSINESS OVERVIEW | 252

TABLE 222 | VDL BUS & COACH BV: DEALS | 252

14.1.20 HOZON NEW ENERGY AUTOMOBILE CO. LTD 253

TABLE 223 HOZON NEW ENERGY AUTOMOBILE CO. LTD: BUSINESS OVERVIEW 253

TABLE 224 HOZON NEW ENERGY AUTOMOBILE CO. LTD: DEALS 253

*Details on Business overview, Products/Solutions/Services offered, Recent Developments, MNM view might not be captured in case of unlisted companies.

?

15 APPENDIX 254

15.1 KEY INSIGHTS FROM INDUSTRY EXPERTS 254

15.2 DISCUSSION GUIDE 255

15.3 KNOWLEDGESTORE: MARKETSANDMARKETS? SUBSCRIPTION PORTAL 258

15.4□CUSTOMIZATION OPTIONS□260

15.4.1 CELL TO PACK BATTERY MARKET, BY VEHICLE AND PROPULSION TYPE 260

15.4.2 CELL TO PACK BATTERY MARKET, BY PROPULSION AND COUNTRY 260

15.5 RELATED REPORTS 260

15.6 AUTHOR DETAILS 261



To place an Order with Scotts International:

Scotts International. EU Vat number: PL 6772247784 tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

☐ - Print this form

Cell to Pack Battery Market by Form (Prismatic, Pouch, Cylindrical), Battery Type (LFP, NMC), Propulsion (BEV, PHEV), Technology (Blade, LiSER), Vehicle Type (Passenger Cars, Commercial Vehicles) and Region - Global Forecast to 2030

Market Report | 2023-02-10 | 252 pages | MarketsandMarkets

☐ - Complete the rele	evant blank fields and sign			
Send as a scanne	d email to support@scotts-internat	ional.com		
ORDER FORM:				
Select license	License			Price
	Single User			\$4950.00
	Multi User			\$6650.00
	Corporate License			\$8150.00
	Enterprise Site License			\$10000.00
			VAT	
			Total	
				0.4.0.4.6
	t license option. For any questions plea			
□** VAT WIII be added at 2	23% for Polish based companies, individ	duals and EU based com	panies who are unable to provide a	valid EU vat Numbers
Email*		Phone*		
First Name*		Last Name*		
Job title*				
Company Name*		EU Vat / Tax ID / NIF	P number*	
Address*		City*		
Zip Code*		Country*		

Date	2025-05-20
Signature	

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