



United States Granular Polysilicon Market Report 2017

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MT

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Summary

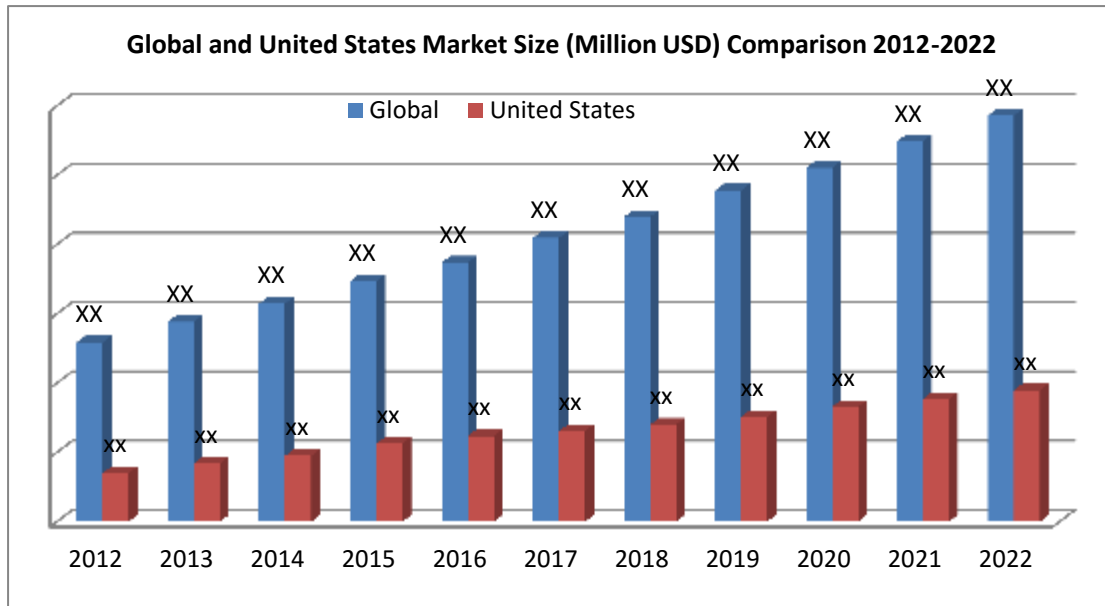
The global Granular Polysilicon market is valued at XX million USD in 2016 and is expected to reach XX million USD by the end of 2022, growing at a CAGR of XX% between 2016 and 2022.

United States plays an important role in global market, with market size of xx million USD in 2016 and will be xx million USD in 2022, with a CAGR of xx%.

This report studies the Granular Polysilicon development status and future trend in United States, focuses on top players in United States, also splits Granular Polysilicon by type and by applications, to fully and deeply research and reveal the market general situation and future forecast.

The major players in United States market include

- REC Silicon
- AEP' s Polysilicon
- Wacker
- MEMC
- Hemlock
- Shaanxi Non Ferrous Tian Hong Rec Silicon Materials



Source: Annual Reports, Secondary Information, Press Releases, Expert Interviews and QYResearch, Nov 2017

Geographically, this report splits the United States market into six regions,

- The West
- Southwest
- The Middle Atlantic
- New England
- The South
- The Midwest

On the basis of product, the Granular Polysilicon market is primarily split into

- 1–3 mm Diameter
- Others

Table Granular Polysilicon Sales (MT) and Revenue (Million USD) Market Split by Product Type

Market Segment by Type	2016	2017	2018	2019	2020	2021	2022
1–3 mm Diameter	XX	XX	XX	XX	XX	XX	XX
-Change (%)	XX%	XX%	XX%	XX%	XX%	XX%	XX%
Others	XX	XX	XX	XX	XX	XX	XX
-Change (%)	XX%	XX%	XX%	XX%	XX%	XX%	XX%
Total	XX	XX	XX	XX	XX	XX	XX
-Change (%)	XX%	XX%	XX%	XX%	XX%	XX%	XX%

Source: Secondary Literature, Press Releases, Expert Interviews and QYResearch, Nov 2017

On the basis on the end users/applications, this report covers

- Solar Photovoltaic (PV) Market
- Others

Table Granular Polysilicon Sales (MT) by Application (2016-2022)

	2012	2016	2022	Market Share (%)2022	CAGR (%) (2016-2022)
Solar Photovoltaic (PV) Market	xx	xx	xx	xx%	xx%
Others	xx	xx	xx	xx%	xx%
Total	xx	xx	xx	100%	xx%

Source: Secondary Literature, Press Releases, Expert Interviews and QYResearch

1 Methodology/Research Approach

This research study involved the extensive usage of both primary and secondary data sources. The research process involved the study of various factors affecting the industry, including the government policy, market environment, competitive landscape, historical data, present trends in the market, technological innovation, upcoming technologies and the technical progress in related industry, and market risks, opportunities, market barriers and challenges. The following illustrative figure shows the market research methodology applied in this report.

1.1 Research Programs/Design

Table Research Programs/Design for This Report

Research Design		
US Market Historical Data (2012-2016)	Industry Trends	Sales, Revenue in USA; Status and Outlook;
	Competitive Landscape <ul style="list-style-type: none"> • By Manufacturers; • Expansion; • Mergers and Acquisitions 	Product Sales, Revenue for Top Players <ul style="list-style-type: none"> • Market Share • Growth Rate • Product Sales Price • Present Situation Analysis;
	Market Segment <ul style="list-style-type: none"> • By Types • By Applications • By Regions/ Geography 	Sales Volume, Revenue Market Share; <ul style="list-style-type: none"> • Growth Rate • Product Sales Price • Present Situation Analysis
Influencing Factors	Market Environment <ul style="list-style-type: none"> • Government Policy • Technological Changes 	Market Drivers <ul style="list-style-type: none"> • Growing Demand of Downstream • Reduction in Cost
	Market Risks	Market Opportunities and Challenges
US Market Forecast (2017-2022)	Market Size Forecast <ul style="list-style-type: none"> • US Overall Size • By Type/Product Category • By Applications/End Users • By Regions/Geography 	Key Data (Sales and Revenue) <ul style="list-style-type: none"> • Market Size; • Market Share (%); • Growth Rate (%); • CAGR (%); • Product Sales Price

1.2 Market Size Estimation

Top-down and bottom-up approaches are used to validate the US Granular Polysilicon market size market and estimate the market size for manufacturers, regions segments, product segments and applications (end users).

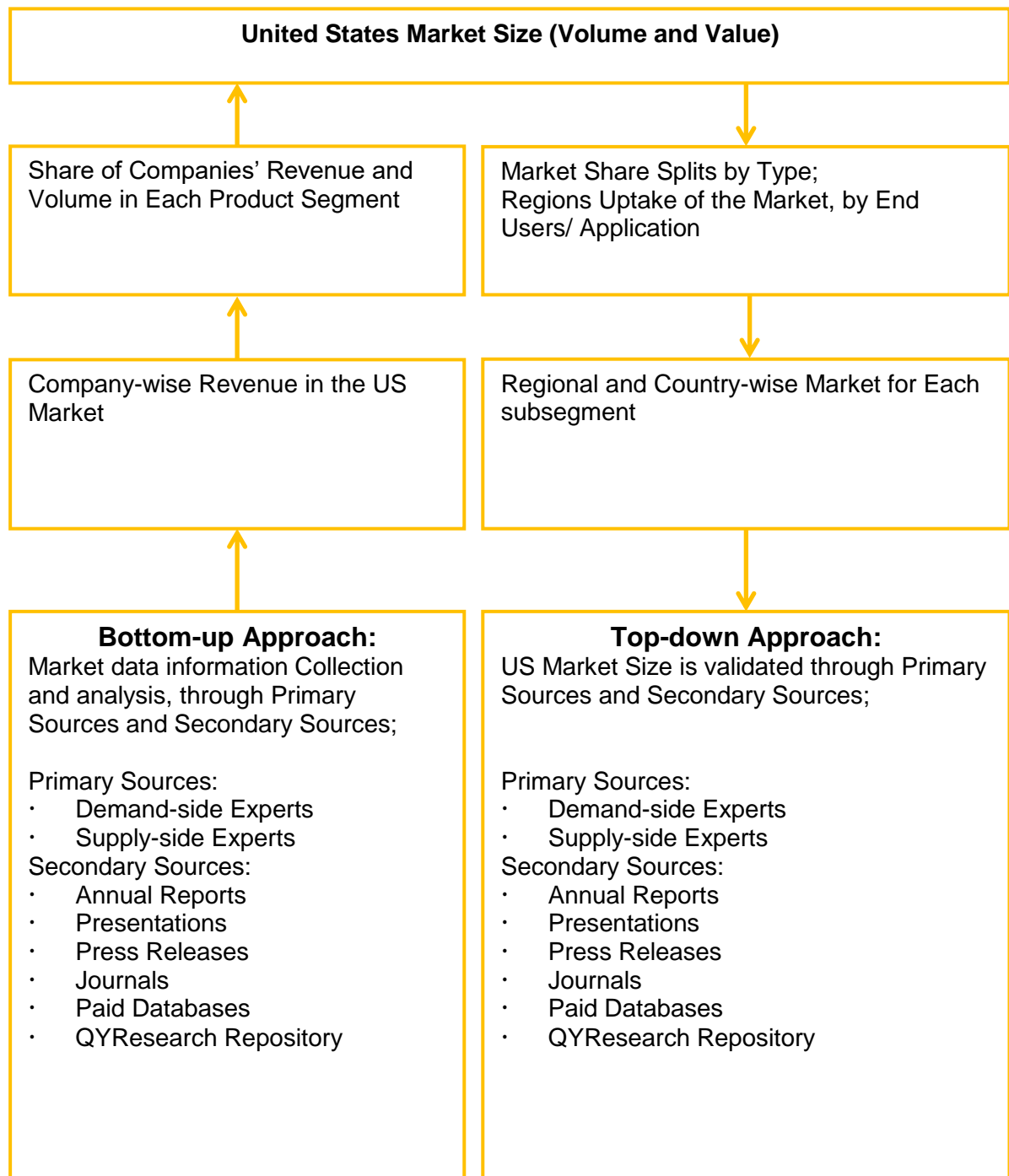
The market estimations in this report are based on the marketed sale price of Granular Polysilicon (excluding any discounts provided by the manufacturer, distributor, wholesaler or traders). The percentage splits, market shares, and breakdowns of the product segments are derived on the basis of weightages assigned to each of the segments on the basis of their utilization rate and average sale price. The regional splits of the overall Granular Polysilicon market and its sub-segments are based on the percentage adoption or utilization of the given product in the respective region or country.

Major players in the market are identified through secondary research and their market revenues determined through primary and secondary research. Secondary research included the research of the annual and financial reports of the top manufacturers; whereas, primary research included extensive interviews of key opinion leaders and industry experts such as experienced front-line staff, directors, CEOs and marketing executives. The percentage splits, market shares, growth rate and breakdowns of the product markets are determined through using secondary sources and verified through the primary sources.

All possible factors that influence the markets included in this research study have been accounted for, viewed in extensive detail, verified through primary research, and analyzed to get the final quantitative and qualitative data. The market size for top-level markets and sub-segments is normalized, and the effect of inflation, economic downturns, and regulatory & policy changes or other factors are not accounted for in the market forecast. This data is combined and added with detailed inputs and analysis from QYResearch and presented in this report.

The following figure shows an illustrative representation of the overall market size estimation process used for this study.

Figure Bottom-up and Top-down Approaches for This Report

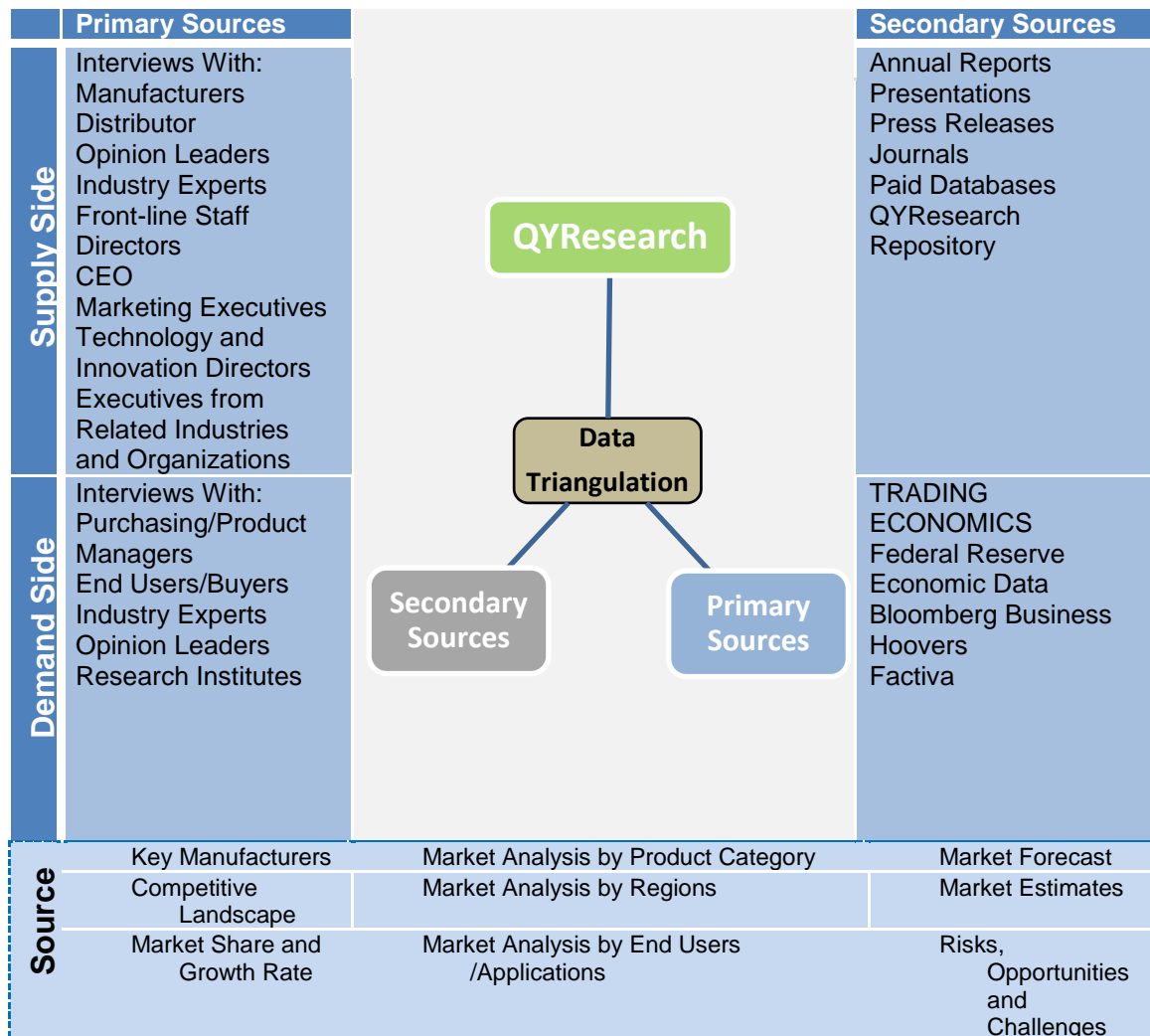


1.3 Market Breakdown and Data Triangulation

After complete market engineering with calculations for market statistics; market size estimations; market forecasting; market breakdown; and data triangulation, extensive primary research was conducted to gather information and verify and validate the critical numbers arrived at. In the complete market engineering process, both top-

down and bottom-up approaches were extensively used, along with several data triangulation methods, to perform market estimation and market forecasting for the overall market segments and sub segments listed in this report. Extensive qualitative and further quantitative analysis is also done from all the numbers arrived at in the complete market engineering process to list key information throughout the report.

Figure Data Triangulation



2 Data Source

2.1 Secondary Sources

Secondary Sources such as press releases, annual reports, Non-Profit organizations, industry associations, governmental agencies and customs data, and so on; This research study involved the usage of widespread secondary sources; directories; databases such as Bloomberg Business, Wind Info, Hoovers, Factiva (Dow Jones & Company), TRADING ECONOMICS, and avention; Investing News Network; statista; Federal Reserve Economic Data; annual reports; BIS Statistics; ICIS; company house documents; CAS(American Chemical Society); investor

presentations; and SEC filings of companies. Secondary research was used to identify and collect information useful for the extensive, technical, market-oriented, and commercial study of the Granular Polysilicon market. It was also used to obtain important information about the top players, market classification and segmentation according to industry trends to the bottom-most level, and key developments related to market and technology perspectives.

Table Key Data Information from Secondary Sources

Parameters	Key Data	Sources
Market Size	Segmental Revenue/Sales Volume	<ul style="list-style-type: none"> Journals, Websites, and Press Releases Annual Reports and SEC Filings Company Websites and Press Releases Public and Paid Databases QYResearch Data Repository
	Geographic Penetration	
	Product Adoption Rate For Different End Users	
	Product Pricing (Selling Price)	
Market Position of Top Players	Product Financials	<ul style="list-style-type: none"> Company Websites and Press Releases Public and Paid Databases Annual Reports Industry Associations QYResearch Data Repository
	Geographic Revenue Mix	
	Total Company Revenue	
	Business/Segmental Revenue Mix	
Qualitative Analysis	Influence Factors	<ul style="list-style-type: none"> Company Websites and Press Releases Public and Paid Databases Annual Reports Industry Associations QYResearch Data Repository
	Market Potential	
	Market Risks and Opportunities	
	Industry Trends	
	Geographical Features	
	Government Policies	

2.2 Primary Sources

In the primary research process, various sources from both the supply and demand sides were interviewed to obtain qualitative and quantitative information for this report. The primary sources from the supply side include product manufacturers (and their competitors), opinion leaders, industry experts, research institutions, distributors, dealer and traders, as well as the raw materials suppliers and producers etc.

The primary sources from the demand side include industry experts such as business leaders, marketing and sales directors, technology and innovation directors, supply chain executive, end users (product buyers), and related key executives from various key companies and organizations operating in the US market.

Primary research was conducted to identify segmentation types, product price range, product applications, key players, raw materials supply and the downstream demand, industry status and outlook, and key market dynamics such as risks, influence factors, opportunities, market barriers, industry trends, and key player strategies.

Table Key Data Information from Primary Sources

Primary Sources	Parameters	Key Data
Market	By Product	Sales Volume and
		Sales Volume, Revenue and

Segment s	Types	Revenue by Product Types, Status and Outlook	Market Share of Product Types Sales Volume, Revenue and Growth Rate of Product Types
	By Applications (End Users)	Sales Volume by Applications/End Users, Status and Outlook	Sales Volume of Product in Major Applications Percentage and Growth Rate of Each Application
	Market Segments by Regions	Sales Volume and Revenue by Regions, Status and Outlook (2012-2022)	Sales Volume, Growth Rate and Market Share by Regions Revenue, Growth Rate and Market Share by Regions
US Market		US Overall Size (Sales and Revenue), Present Situation and Forecast	US Market Size (Volume) Status and Forecast (2012-2022)
			US Market Size (Million USD) Status and Forecast (2012-2022)

3 Disclaimer

The information and opinions in this report were prepared by QYResearch. The information herein is believed to be reliable and has been obtained from authentic public sources.

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Figure Company Ten Granular Polysilicon Sales Market Share (%) in US (2012-2017)

Figure Company Ten Granular Polysilicon Revenue Market Share (%) in US (2012-2017)

Table Production Base and Market Concentration Rate of Raw Material

Figure Price Trend of Key Raw Materials

Table Key Suppliers of Raw Materials

Figure Manufacturing Cost Structure of Granular Polysilicon

Figure Manufacturing Process Analysis of Granular Polysilicon

Figure Granular Polysilicon Industrial Chain Analysis

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Table Major Buyers of Granular Polysilicon

Table Distributors/Traders List

Figure United States Granular Polysilicon Sales (MT) and Growth Rate (%) Forecast (2017-2022)

Figure United States Granular Polysilicon Revenue (Million USD) and Growth Rate Forecast (2017-2022)

Figure United States Granular Polysilicon Price (USD/MT) Trend Forecast (2017-2022)

Table United States Granular Polysilicon Sales (MT) Forecast by Type (2017-2022)

Figure United States Granular Polysilicon Sales (MT) Forecast by Type (2017-2022)

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Type in 2022

Table United States Granular Polysilicon Sales (MT) Forecast by Application (2017-2022)

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Application (2017-2022)

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Application in 2022

Table United States Granular Polysilicon Sales (MT) Forecast by Regions (2017-2022)

Table United States Granular Polysilicon Sales Volume Share Forecast by Regions (2017-

2022)
Figure United States Granular Polysilicon Sales Volume Share Forecast by Regions (2017-
2022)
Figure United States Granular Polysilicon Sales Volume Share Forecast by Regions in 2022

1 Granular Polysilicon Overview

1.1 Product Overview and Scope of Granular Polysilicon

This report studies the Granular Polysilicon market, mainly used in solar market,

Figure Product Picture of Granular Polysilicon



Source: Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.2 Classification of Granular Polysilicon by Product Category

1.2.1 United States Granular Polysilicon Sales (MT) Comparison by Types (2012-2022)

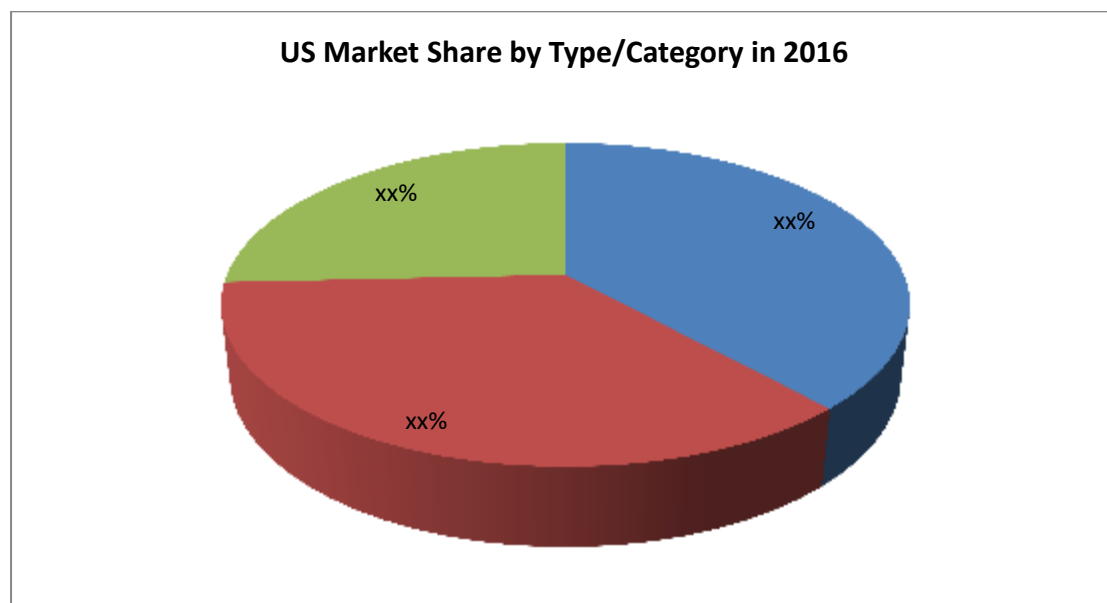
Table United States Granular Polysilicon Sales (MT) and Growth Rate (%) Comparison by Types (Product Category) (2012-2022)

<i>Market Segment by Type</i>	2016	2017	2018	2019	2020	2021	2022
1–3 mm Diameter	XX	XX	XX	XX	XX	XX	XX
-Change (%)	xx%	xx%	xx%	xx%	xx%	xx%	xx%
Others	XX	XX	XX	XX	XX	XX	XX
-Change (%)	xx%	xx%	xx%	xx%	xx%	xx%	xx%
Total	XX	XX	XX	XX	XX	XX	XX
-Change (%)	xx%	xx%	xx%	xx%	xx%	xx%	xx%

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.2.2 United States Granular Polysilicon Sales (MT) Market Share by Types (Product Category) in 2016

Figure United States Granular Polysilicon Sales Volume Market Share by Types (Product Category) in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.2.3 1–3 mm Diameter

In 2016, the 1–3 mm Diameter sales volume was XX and the market share was XX%, and it will be XX and XX% in 2022, with a CAGR XX% from 2016 to 2022.

Figure 1–3 mm Diameter Product Picture

Source: Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.2.4 Others

In 2016, the Others sales volume was XX and the market share was XX%, and it will be XX and XX% in 2022, with a CAGR XX% from 2016 to 2022.

Figure Others Product Picture

Source: Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.3 United States Granular Polysilicon Market by Applications/End Users

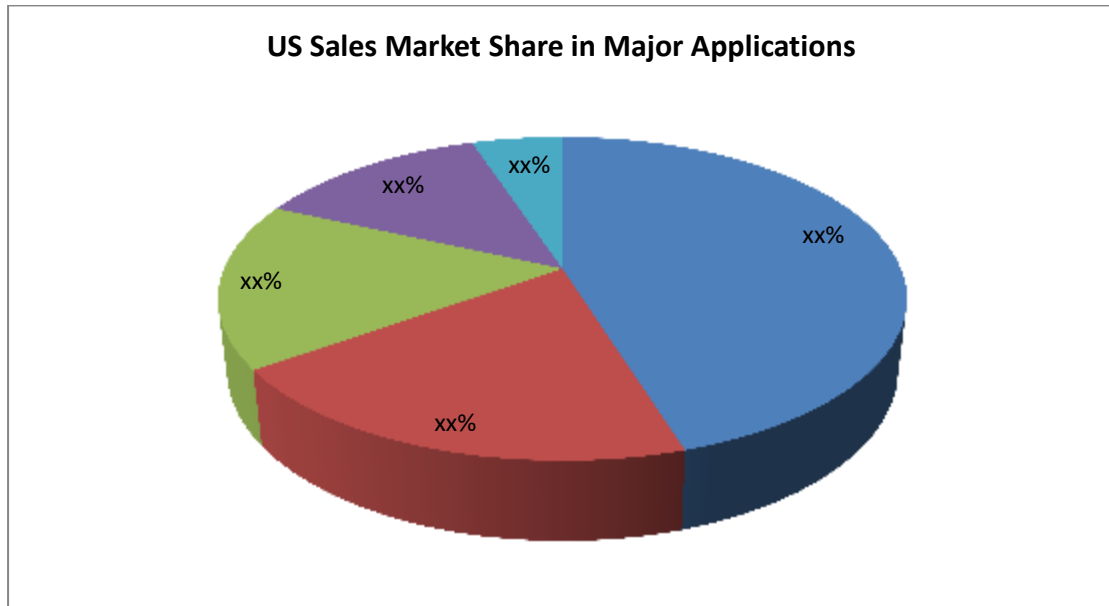
1.3.1 United States Granular Polysilicon Sales (MT) and Market Share Comparison by Applications (2012-2022)

Table United States Granular Polysilicon Sales (MT) Comparison by Applications (2012-2022)

	2012	2016	2022	Market Share (%)2022	Growth Rate (%) (2016-2022)
Solar Photovoltaic (PV) Market	XX	XX	XX	xx%	xx%
Others	XX	XX	XX	xx%	xx%
...	XX	XX	XX	xx%	xx%
Total	XX	XX	XX	100%	xx%

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Sales Market Share (%) of Granular Polysilicon by Applications in 2016



Source: Secondary Sources, Press Releases and QYR Chemical & Materials Research Center, Nov 2017

1.3.2 Solar Photovoltaic (PV) Market

In 2016, the Granular Polysilicon Sales (MT) in Solar Photovoltaic (PV) Market was XX, and it will reach XXX in 2022; while the Sales Market Share (%) in Solar Photovoltaic (PV) Market was XX% in 2016 and will be XXX% in 2022.

Figure Solar Photovoltaic (PV) Market Examples

Source: Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.3.3 Others

In 2016, the Granular Polysilicon Sales (MT) in Others was XX, and it will reach XXX in 2022; while the Sales Market Share (%) in Others was XX% in 2016 and will be XXX% in 2022.

Figure Others Examples

Source: Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4 United States Granular Polysilicon Market by Regions

The West covers California (CA), Colorado (CO), Idaho (ID), Montana (MT), Nevada (NV), Oregon (OR), Utah (UT), Washington (WA) and Wyoming (WY);

The Midwest covers Iowa (IA), Illinois (IL), Indiana (IN), Kansas (KS), Michigan (MI), Minnesota (MN), Missouri (MO), North Dakota (ND), Nebraska (NE), Ohio (OH), South Dakota (SD) and Wisconsin (WI);

The South covers Alabama (AL), Arkansas (AR), Florida (FL), Georgia (GA), Kentucky (KY), Louisiana (LA), Mississippi (MS), North Carolina (NC), South Carolina (SC), Tennessee (TN), Virginia (VA) and West Virginia (WV);

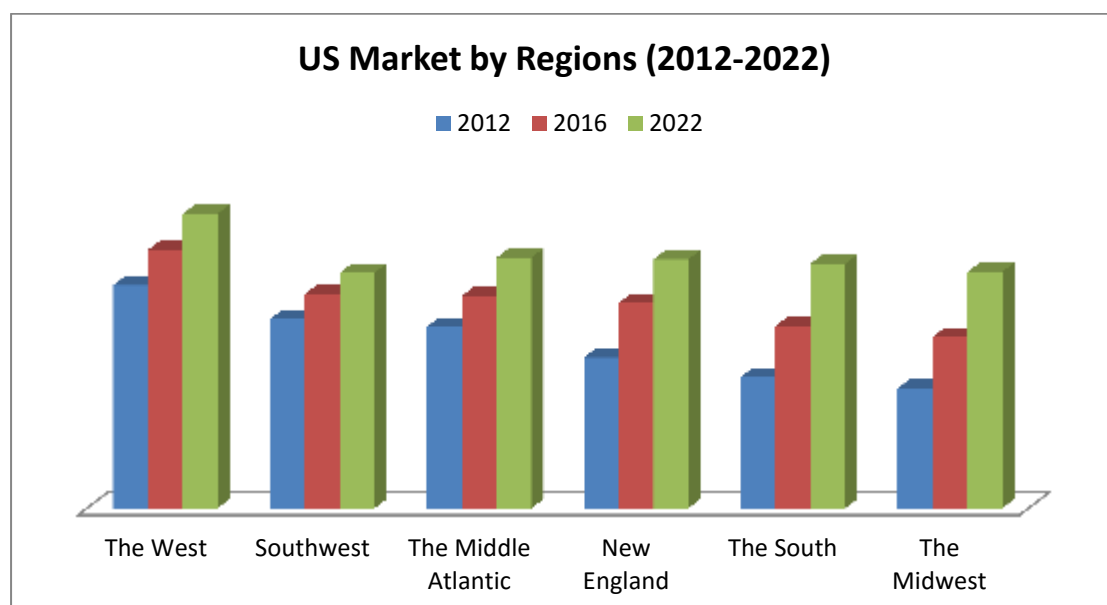
New England covers Connecticut (CT), Massachusetts (MA), Maine (ME), New Hampshire (NH), Rhode Island (RI) and Vermont (VT);

The Middle Atlantic covers Washington DC (DC), Delaware (De), Maryland (MD), New Jersey (NJ), New York (NY) and Pennsylvania (PA);

And Southwest covers Arizona (AZ), New Mexico (NM), Oklahoma (OK) and Texas (TX).

1.4.1 United States Granular Polysilicon Market Size (Million USD) Comparison by Regions (2012-2022)

Figure United States Granular Polysilicon Market Size (Million USD) Comparison by Regions (2012-2022)

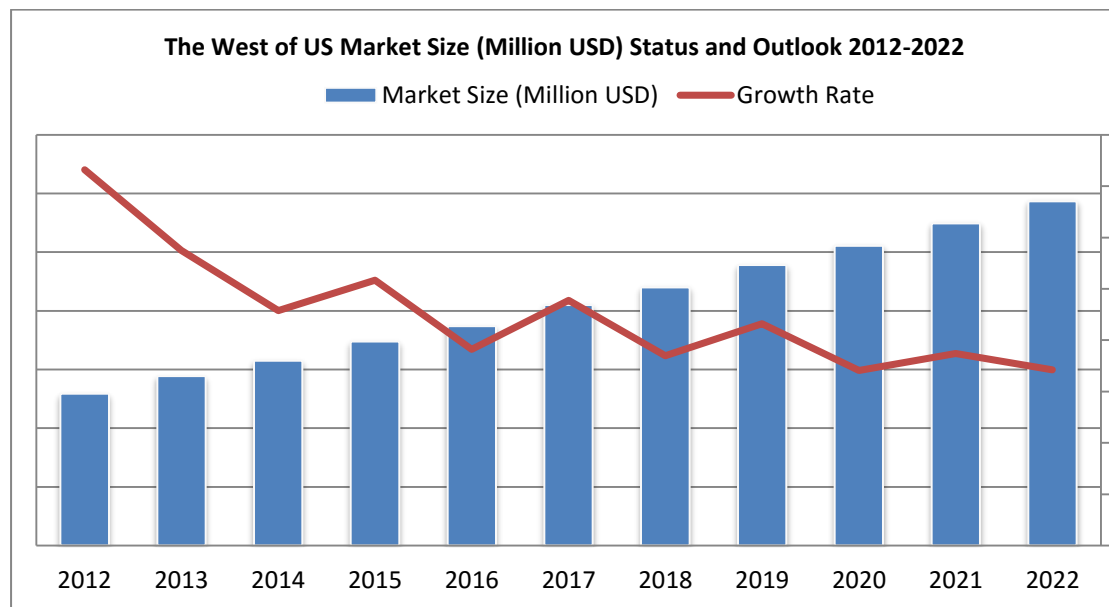


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.2 The West Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in The West of US was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure The West Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

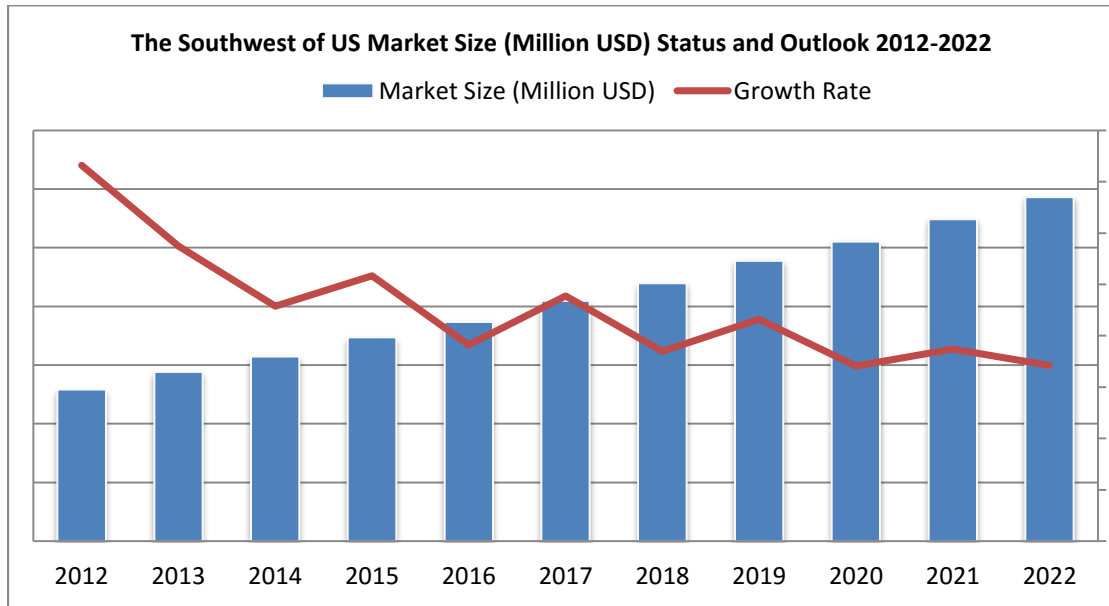


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.3 Southwest Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in Southwest of US was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure Southwest Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

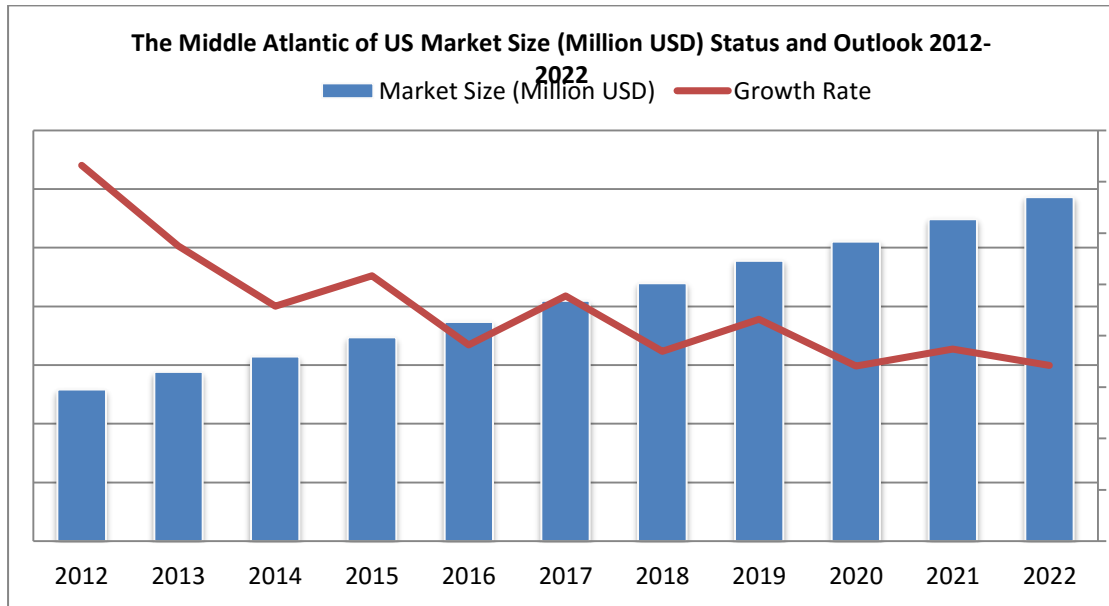


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.4 The Middle Atlantic Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in The Middle Atlantic was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure The Middle Atlantic Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

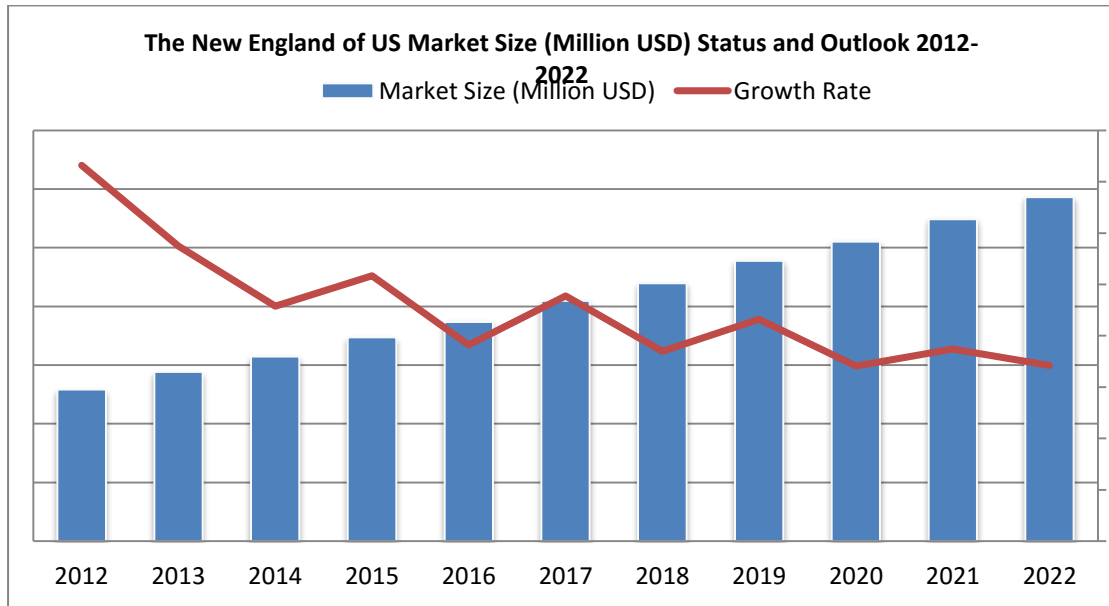


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.5 New England Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in New England was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure New England Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

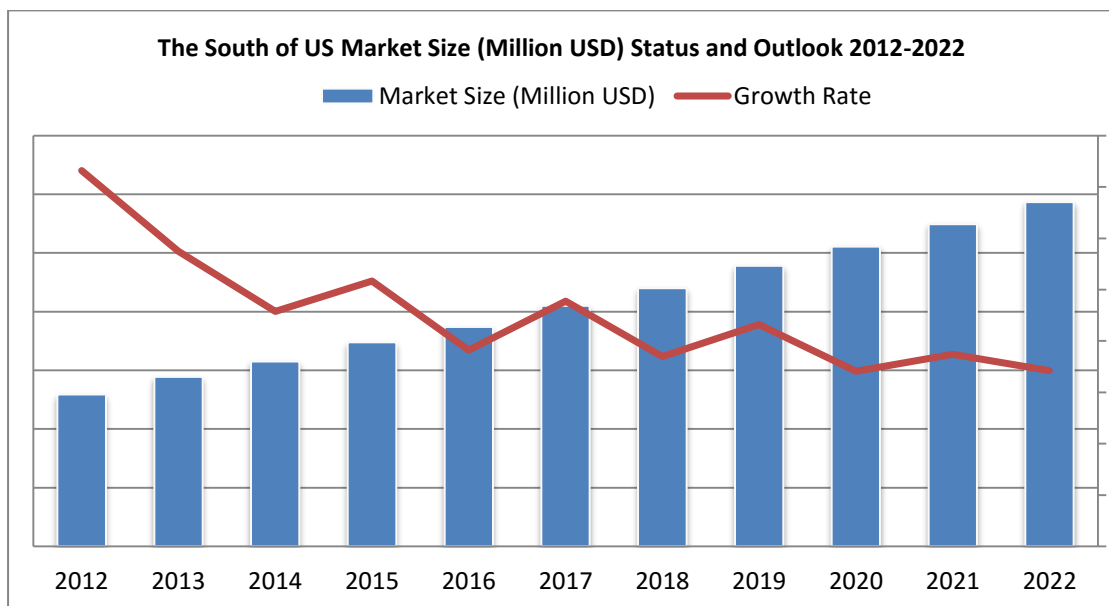


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.6 The South of US Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in The South was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure The South of US Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

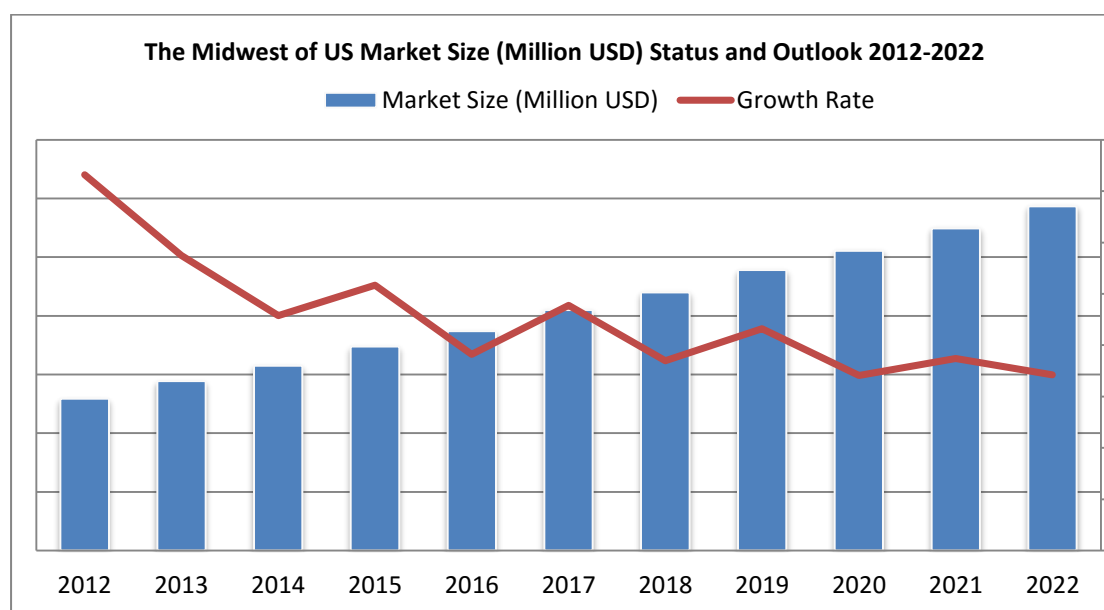


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.4.7 The Midwest Granular Polysilicon Status and Prospect (2012-2022)

The market size of Granular Polysilicon in The Midwest was XX million USD in 2016 and it will be XX million USD in 2022, with a CAGR XX% from 2016 to 2022.

Figure The Midwest Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)



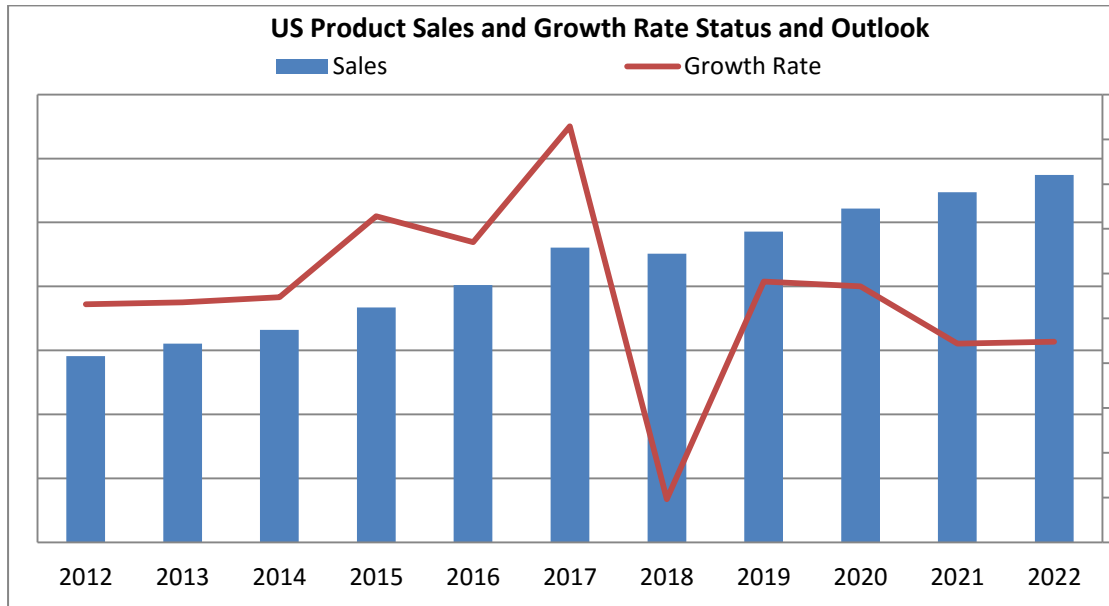
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.5 United States Market Size (Sales and Revenue) of Granular Polysilicon (2012-2022)

1.5.1 United States Granular Polysilicon Sales (MT) and Growth Rate (%) (2012-2022)

In terms of volume, the Granular Polysilicon market sales was XX in United States in 2016, and is predicted to reach XX in 2022.

Figure United States Granular Polysilicon Sales (MT) and Growth Rate (%) (2012-2022)

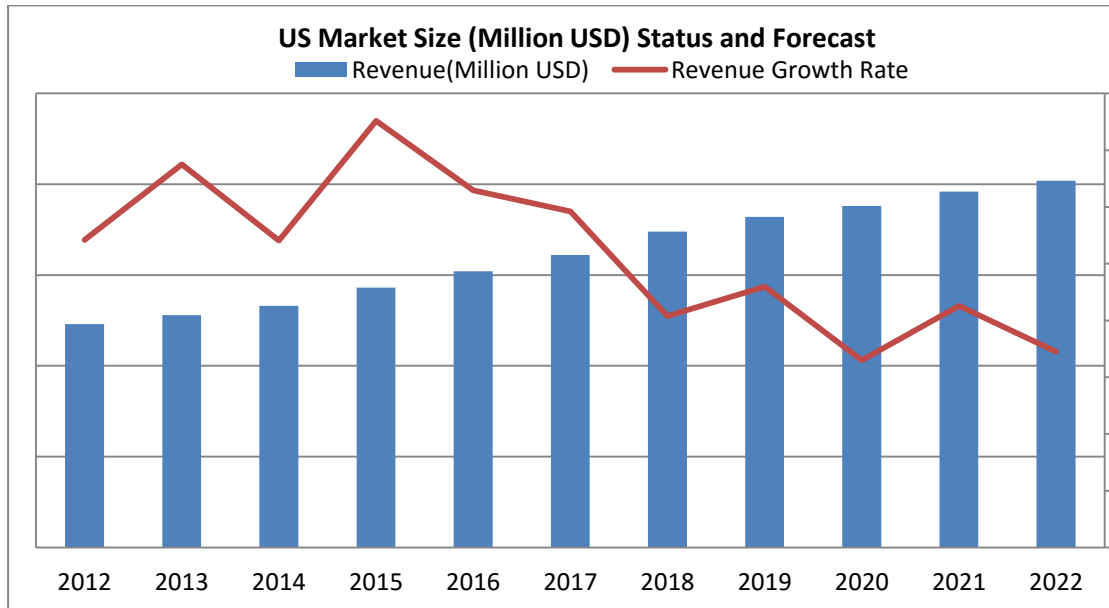


Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

1.5.2 United States Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)

The United States Granular Polysilicon market is valued at USD XX million in 2016 and is expected to reach USD XX million by the end of 2022, growing at a CAGR of XX% between 2016 and 2022.

Figure United States Granular Polysilicon Revenue (Million USD) and Growth Rate (2012-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

2 United States Granular Polysilicon

Market Competition by

Players/Manufacturers

2.1 United States Granular Polysilicon Sales and Market Share of Key Players/Manufacturers (2012-2017)

In United States market, the top players cover REC Silicon, AEP' s Polysilicon, Wacker, MEMC and Hemlock etc., which are playing important roles in United States.

Table United States Granular Polysilicon Sales of Key Players/Manufacturers (2012-2017)

<i>Sales</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
REC Silicon						
AEP' s Polysilicon						
Wacker						
MEMC						
Hemlock						
...						
Total						

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

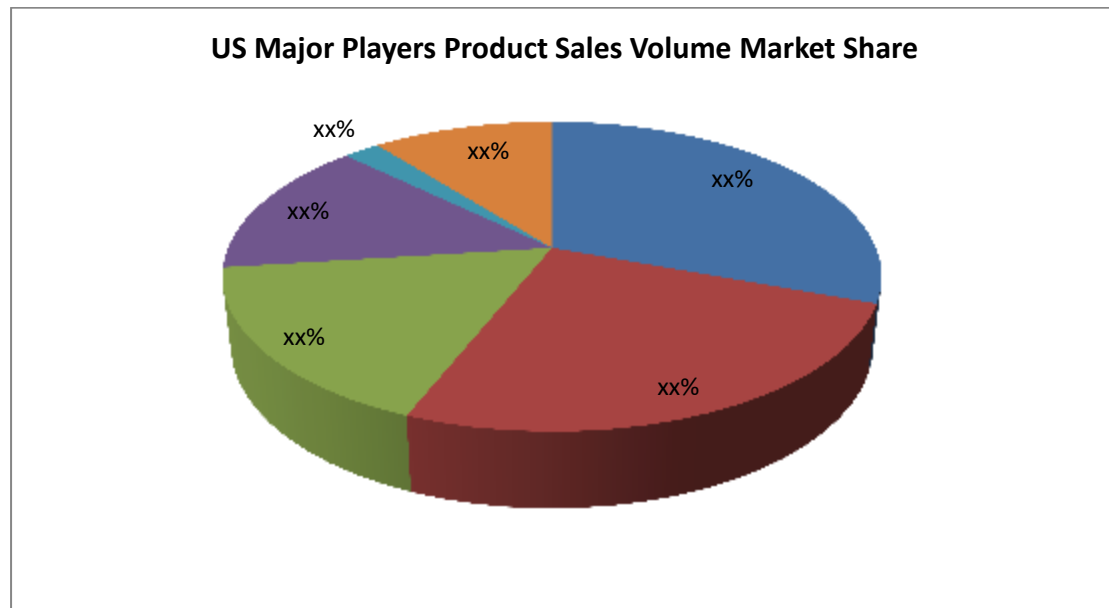
Table United States Granular Polysilicon Sales Share (%) by Players/Manufacturers (2012-2017)

<i>Sales Market Share</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
REC Silicon						
AEP' s Polysilicon						
Wacker						
MEMC						

Hemlock	
...	
Total	

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure 2016 United States Granular Polysilicon Sales Share (%) by Players/Manufacturers



Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure 2017 United States Granular Polysilicon Sales Share (%) by Players/Manufacturers

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

2.2 United States Granular Polysilicon Revenue and Share by Players/Manufacturers (2012-2017)

Table United States Granular Polysilicon Revenue by Players/Manufacturers (2012-2017)

<i>Revenue</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
REC Silicon						
AEP' s Polysilicon						
...						

Total	
-------	--

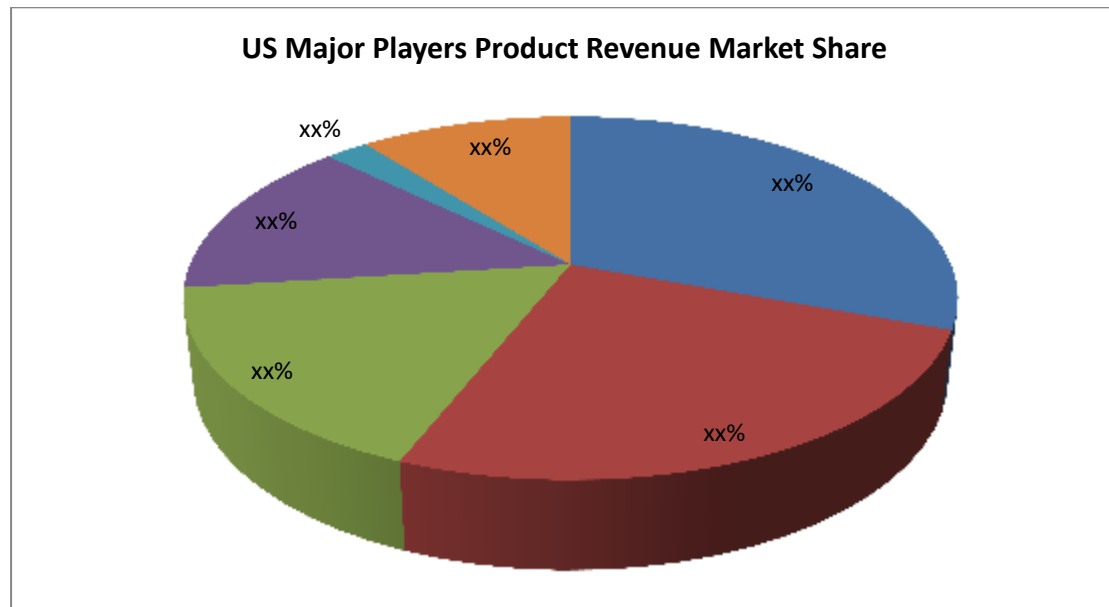
Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Table United States Granular Polysilicon Revenue Market Share (%) by Players/Manufacturers (2012-2017)

	2012	2013	2014	2015	2016	2017
REC Silicon						
AEP' s Polysilicon						
...						
Total						

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure 2016 United States Granular Polysilicon Revenue Market Share (%) by Players/Manufacturers



Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure 2017 United States Granular Polysilicon Revenue Market Share (%) by Players/Manufacturers

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

2.3 United States Granular Polysilicon Average Price (USD/MT) by Players/Manufacturers (2012-2017)

Table United States Market Granular Polysilicon Average Price of Key Players/Manufacturers (2012-2017)

	2012	2013	2014	2015	2016	2017
REC Silicon						
AEP' s Polysilicon						
...						
Total						

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure United States Market Granular Polysilicon Average Price of Key Players/Manufacturers in 2016

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

2.4 United States Granular Polysilicon Market Competitive Situation and Trends

2.4.1 United States Granular Polysilicon Market Concentration Rate

2.4.2 United States Granular Polysilicon Market Share of Top 3 and Top 5 Players/Manufacturers

Figure United States Granular Polysilicon Market Share of Top 3 Players/Manufacturers

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Figure United States Granular Polysilicon Market Share of Top 5 Players/Manufacturers

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

2.4.3 Mergers & Acquisitions, Expansion in United States Market

2.5 United States Players/Manufacturers Granular Polysilicon Manufacturing Base Distribution, Sales Area, Product Types

Table United States Players/Manufacturers Granular Polysilicon Manufacturing Base Distribution and Sales Area

	<i>Manufacturing Base Distribution</i>	<i>Sales Area</i>
REC Silicon AEP' s Polysilicon ...		

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

Table United States Players/Manufacturers Granular Polysilicon Product Category

	<i>Product Types</i>
REC Silicon AEP' s Polysilicon ...	

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

3 United States Granular Polysilicon

Sales and Revenue by Regions (2012-2017)

3.1 United States Granular Polysilicon Sales (MT) and Market Share by Regions (2012-2017)

Table United States Granular Polysilicon Sales (MT) by Regions (2012-2017)

	2012	2013	2014	2015	2016	2017
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

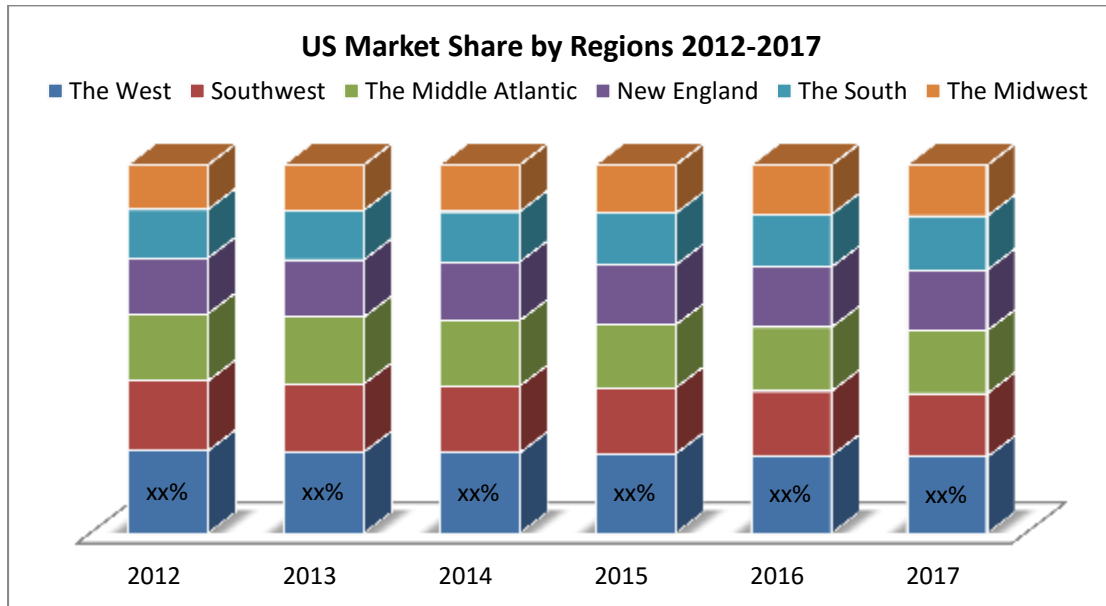
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Sales Share (%) by Regions (2012-2017)

	2012	2013	2014	2015	2016	2017
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

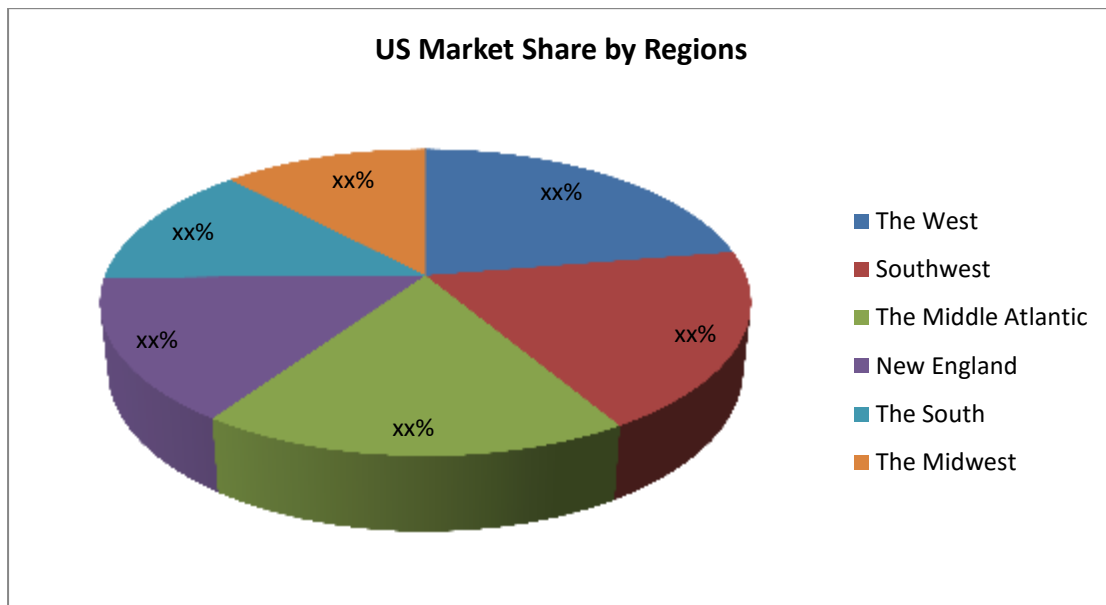
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Share (%) by Regions (2012-2017)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Market Share (%) by Regions in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

3.2 United States Granular Polysilicon Revenue (Million USD) and Market Share by Regions (2012-2017)

Table United States Granular Polysilicon Revenue (Million USD) and Market Share by Regions (2012-2017)

	2012	2013	2014	2015	2016	2017
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

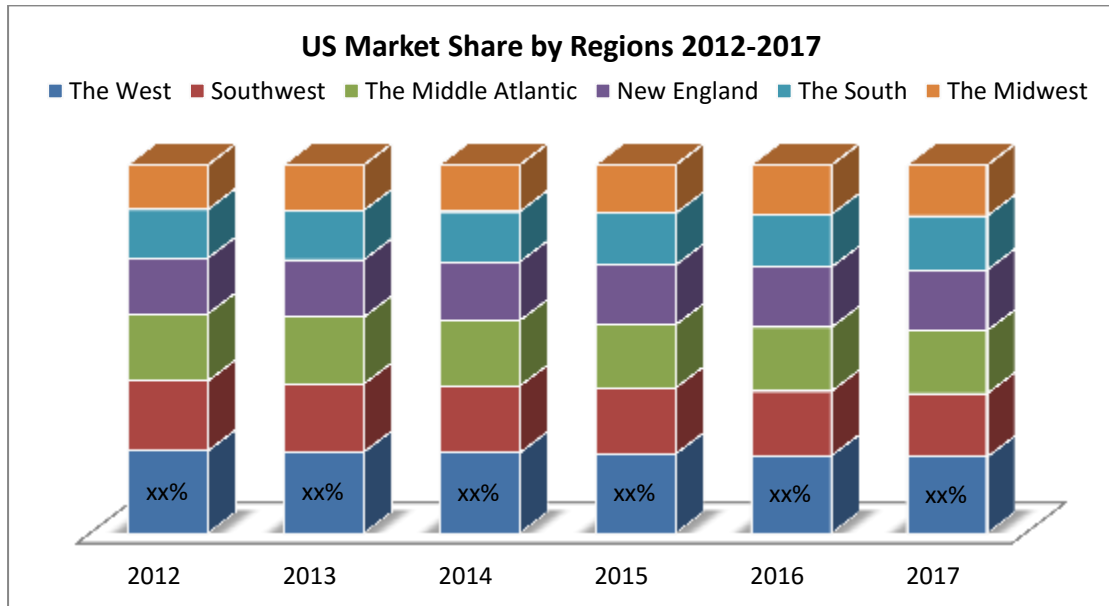
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Revenue Market Share (%) by Regions (2012-2017)

	2012	2013	2014	2015	2016	2017
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

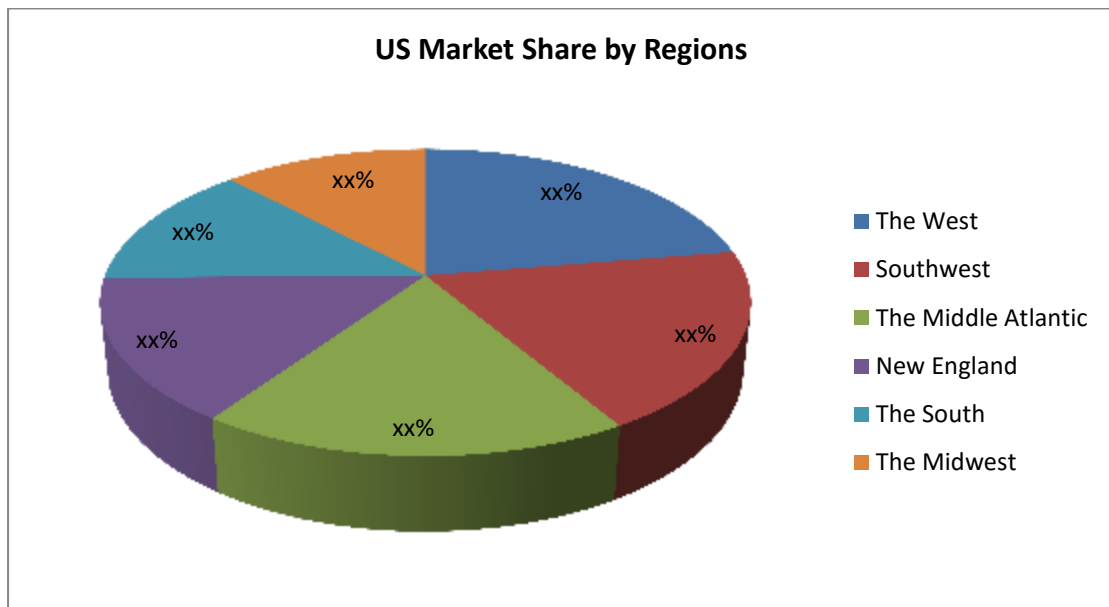
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Revenue Market Share (%) by Regions (2012-2017)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Revenue Market Share (%) by Regions in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

3.3 United States Granular Polysilicon Price (USD/MT) by Regions (2012-2017)

Table United States Granular Polysilicon Price (USD/MT) by Regions (2012-2017)

	2012	2013	2014	2015	2016	2017
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

4 United States Granular Polysilicon

Sales and Revenue by Type/ Product

Category (2012-2017)

4.1 United States Granular Polysilicon Sales (MT) and Market Share by Type/ Product Category (2012-2017)

Table United States Granular Polysilicon Sales (MT) by Type (2012-2017)

	2012	2013	2014	2015	2016	2017
1–3 mm Diameter						
Others						
...						
Total						

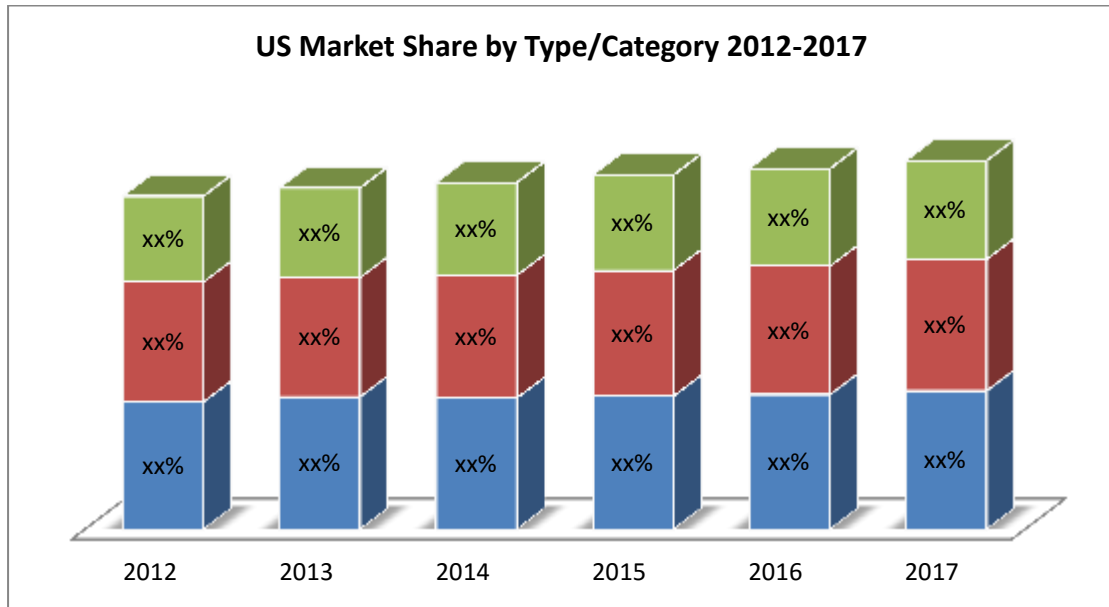
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Sales Share (%) by Type (2012-2017)

	2012	2013	2014	2015	2016	2017
1–3 mm Diameter						
Others						
...						
Total						

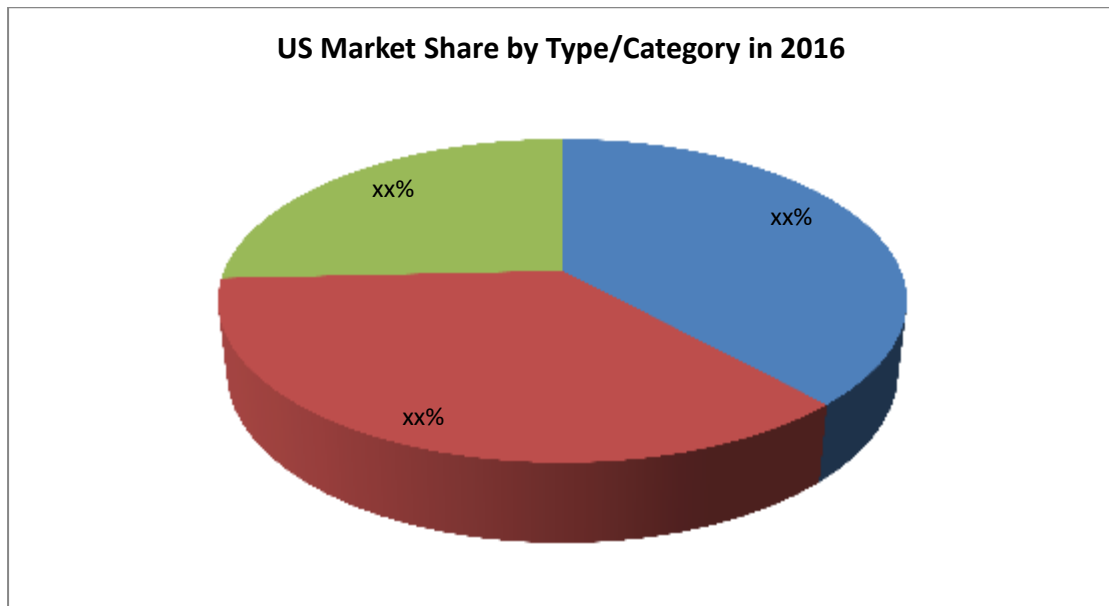
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Share (%) by Type (2012-2017)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Market Share (%) by Type in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

4.2 United States Granular Polysilicon Revenue (Million USD) and Market Share by Type (2012-2017)

Table United States Granular Polysilicon Revenue (Million USD) and Market Share by Type (2012-2017)

	2012	2013	2014	2015	2016	2017
1-3 mm Diameter						
Others						
...						
Total						

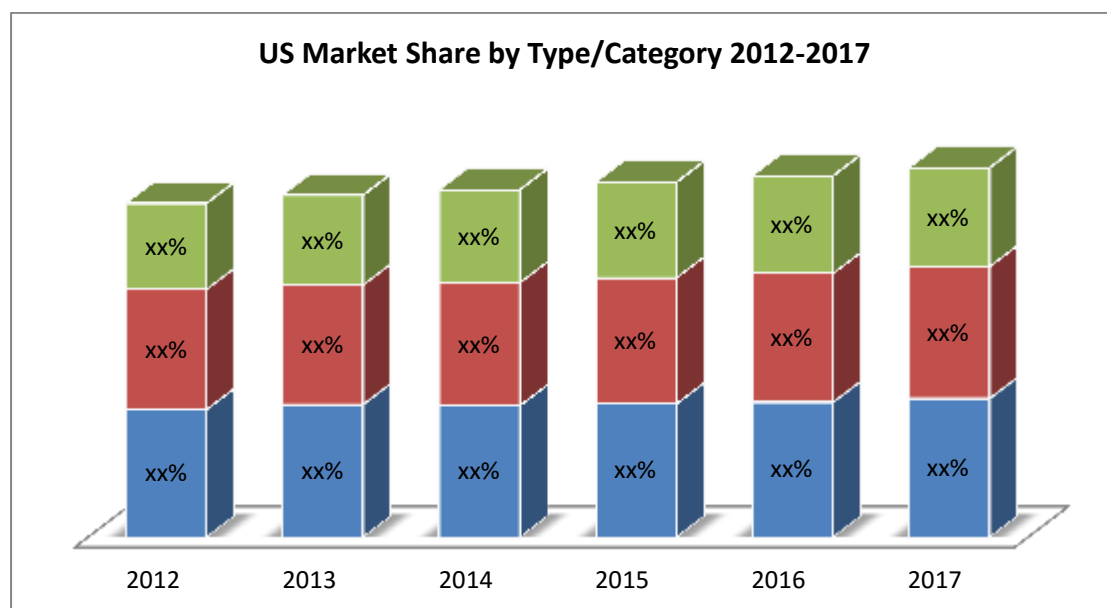
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Revenue Market Share (%) by Type (2012-2017)

	2012	2013	2014	2015	2016	2017
1-3 mm Diameter						
Others						
...						
Total						

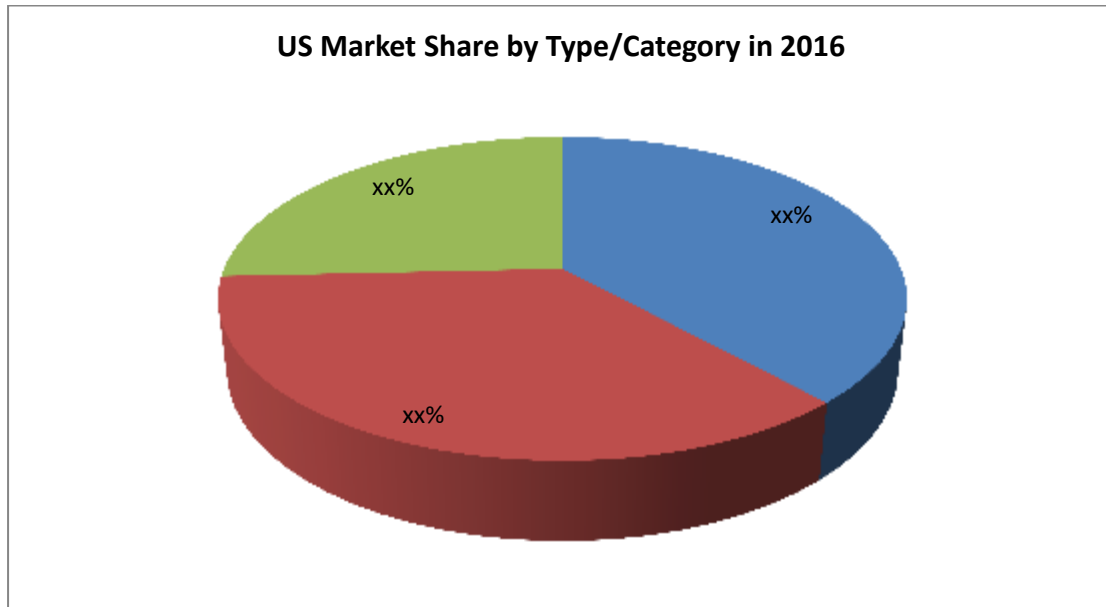
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure Revenue Market Share of Granular Polysilicon by Type (2012-2017)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure Revenue Market Share of Granular Polysilicon by Type in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

4.3 United States Granular Polysilicon Price (USD/MT) by Type (2012-2017)

Table United States Granular Polysilicon Price (USD/MT) by Types (2012-2017)

	2012	2013	2014	2015	2016	2017
1–3 mm Diameter						
Others						
...						
Total						

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

4.4 United States Granular Polysilicon Sales Growth Rate (%) (%) by Type (2012-2017)

Figure United States Granular Polysilicon Sales Growth Rate (%) (%) by Type (2012-2017)

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

5 United States Granular Polysilicon

Sales by Application (2012-2017)

5.1 United States Granular Polysilicon Sales (MT) and Market Share by Applications (2012-2017)

Table United States Granular Polysilicon Sales (MT) by Applications (2012-2017)

	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
Solar Photovoltaic (PV) Market						
Others						
...						
Total						

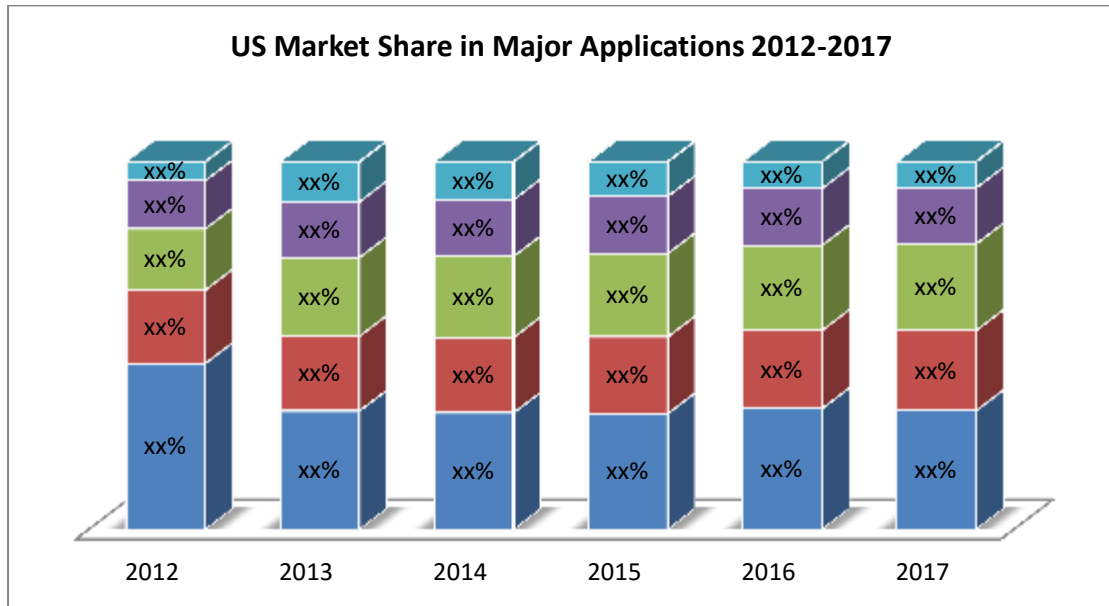
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Sales Market Share (%) by Applications (2012-2017)

	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
Solar Photovoltaic (PV) Market						
Others						
...						
Total						

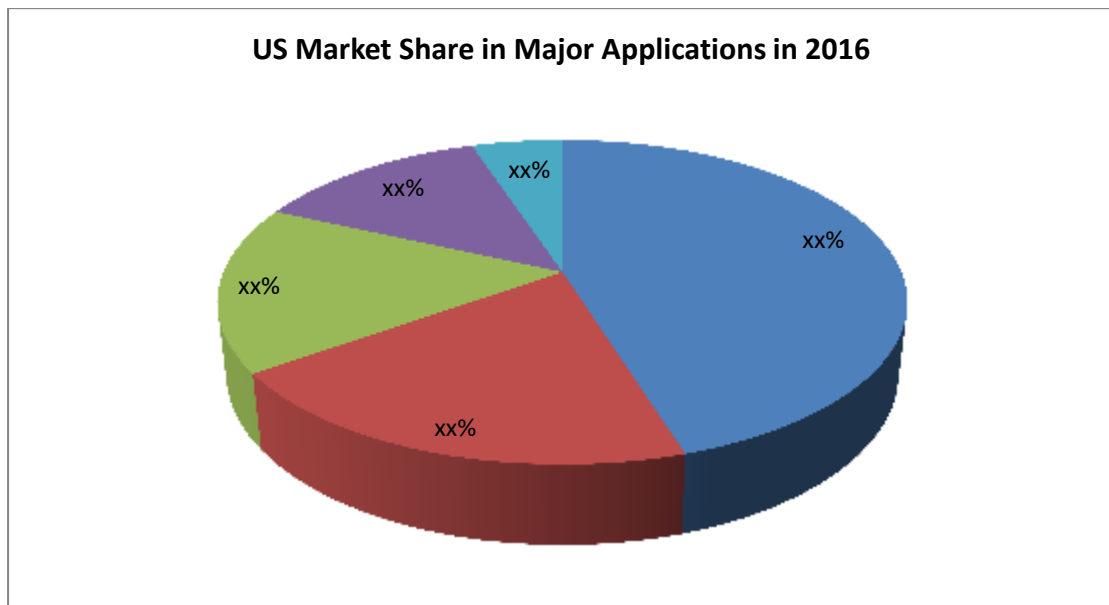
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Market Share (%) by Applications (2012-2017)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Market Share (%) by Applications in 2016



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

5.2 United States Granular Polysilicon Sales Growth Rate (%) (%) by Applications (2012-2017)

Table United States Granular Polysilicon Sales Growth Rate (%) (%) by Applications (2012-2017)

	2012	2013	2014	2015	2016	2017
Solar Photovoltaic (PV) Market						
Others						
...						

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Growth Rate (%) by Applications (2012-2017)

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

5.3 Market Drivers and Opportunities

6 United States Granular Polysilicon

Players/Manufacturers Profiles and

Sales Data

6.1 REC Silicon

6.1.1 Company Basic Information, Manufacturing Base and Competitors

Table REC Silicon Basic Information List

#	Item	Description
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: REC Silicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.1.2 Granular Polysilicon Product Category, Application and Specification

6.1.2.1 Product A

6.1.2.2 Product B

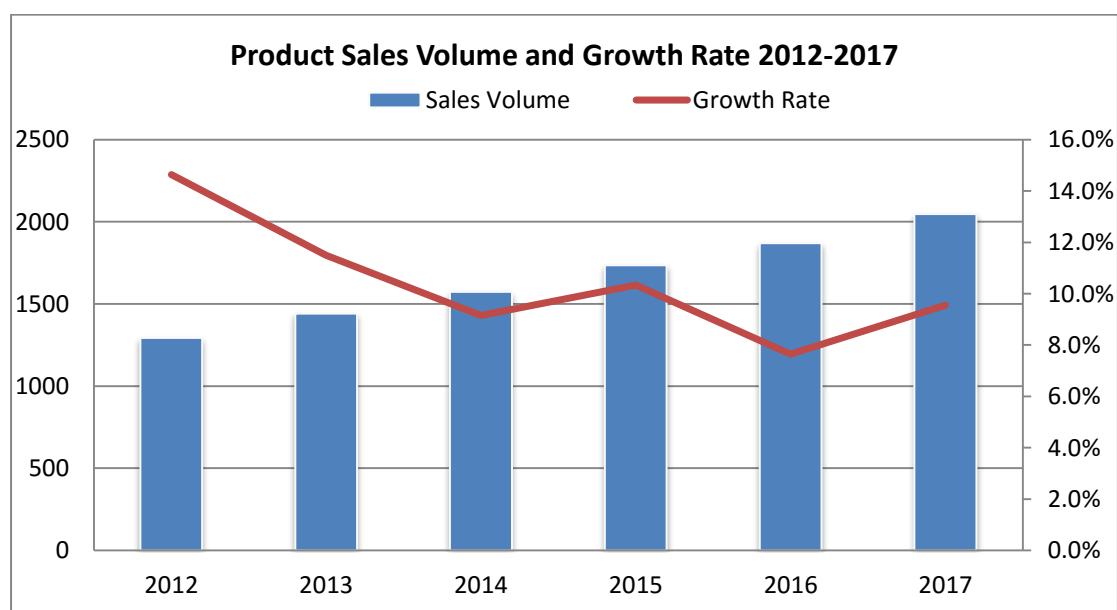
6.1.3 REC Silicon Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

Table REC Silicon Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	2012	2013	2014	2015	2016	2017
Sales						
Revenue						
Price						
Gross Margin						

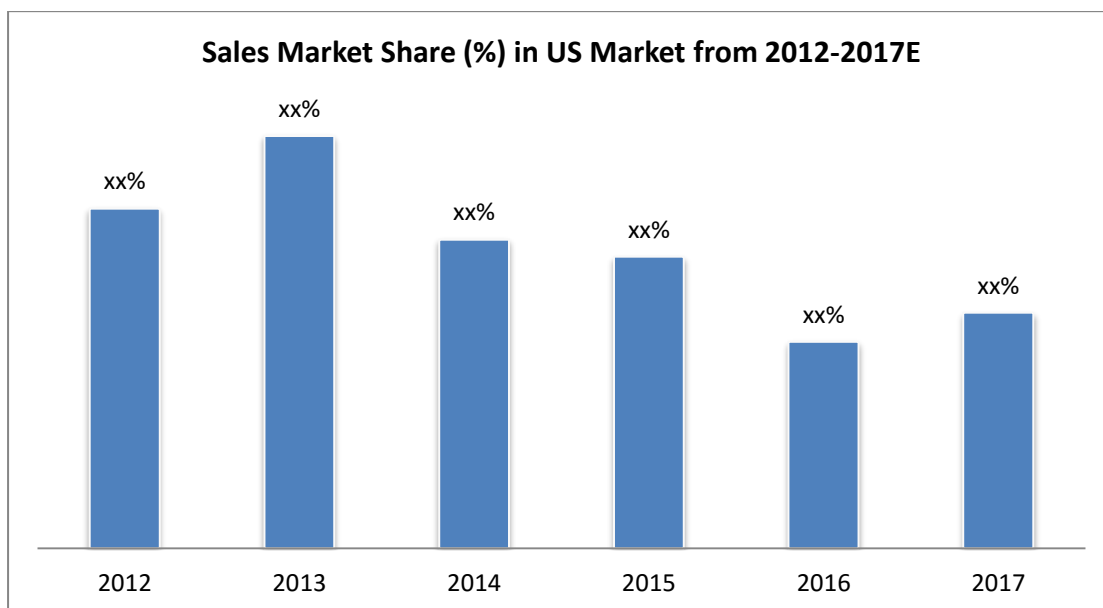
Source: REC Silicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure REC Silicon Granular Polysilicon Sales Growth Rate (%) (2012-2017)



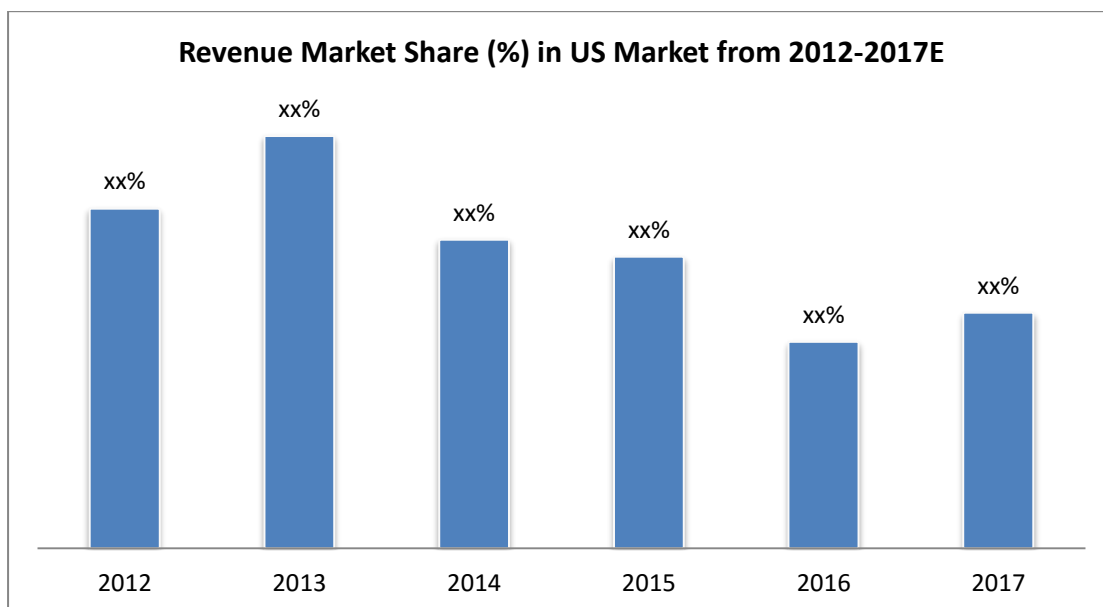
Source: REC Silicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure REC Silicon Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: REC Silicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure REC Silicon Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: REC Silicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.1.4 Main Business/Business Overview

6.2 AEP's Polysilicon

6.2.1 Company Basic Information, Manufacturing Base and Competitors

Table AEP' s Polysilicon Basic Information List

<i>#</i>	<i>Item</i>	<i>Description</i>
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: AEP's Polysilicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.2.2 Granular Polysilicon Product Category, Application and Specification

6.2.2.1 Product A

6.2.2.2 Product B

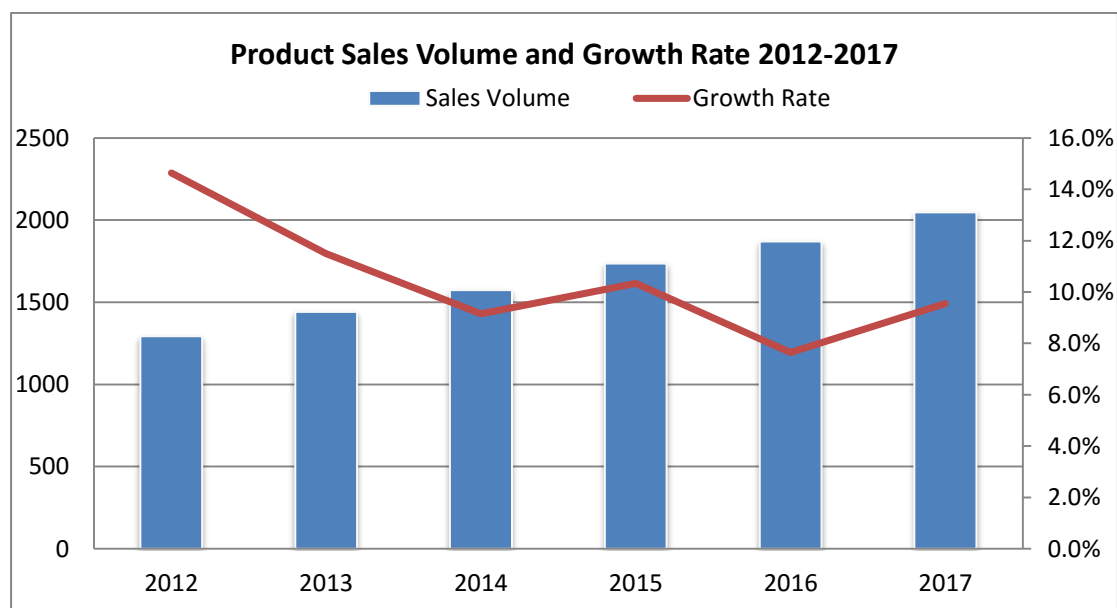
6.2.3 AEP' s Polysilicon Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

Table AEP' s Polysilicon Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	2012	2013	2014	2015	2016	2017
Sales						
Revenue						
Price						
Gross Margin						

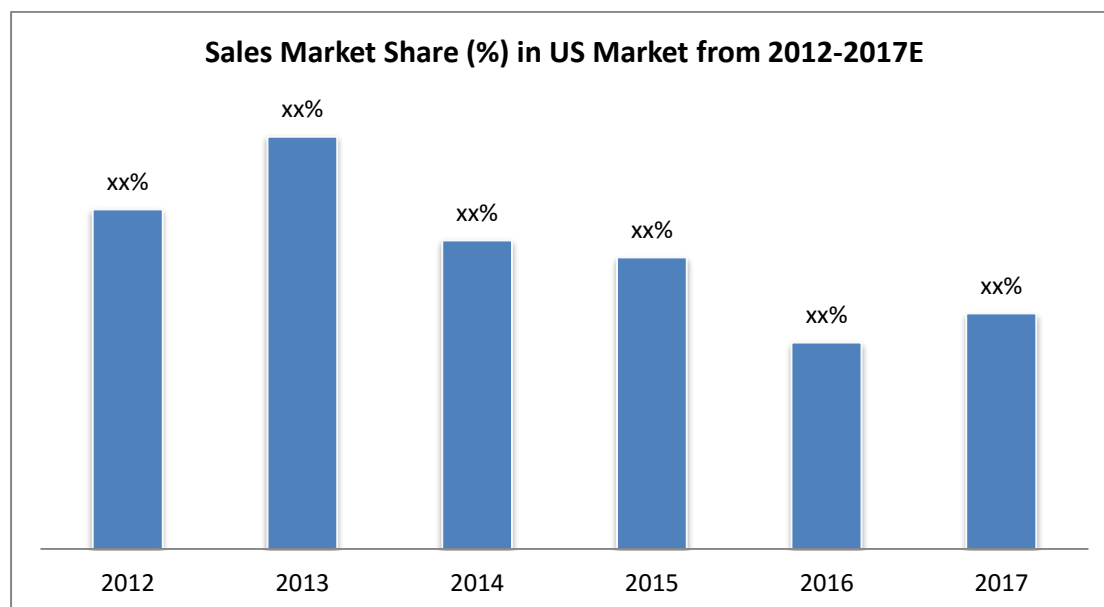
Source: AEP's Polysilicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure AEP' s Polysilicon Granular Polysilicon Sales Growth Rate (%) (2012-2017)



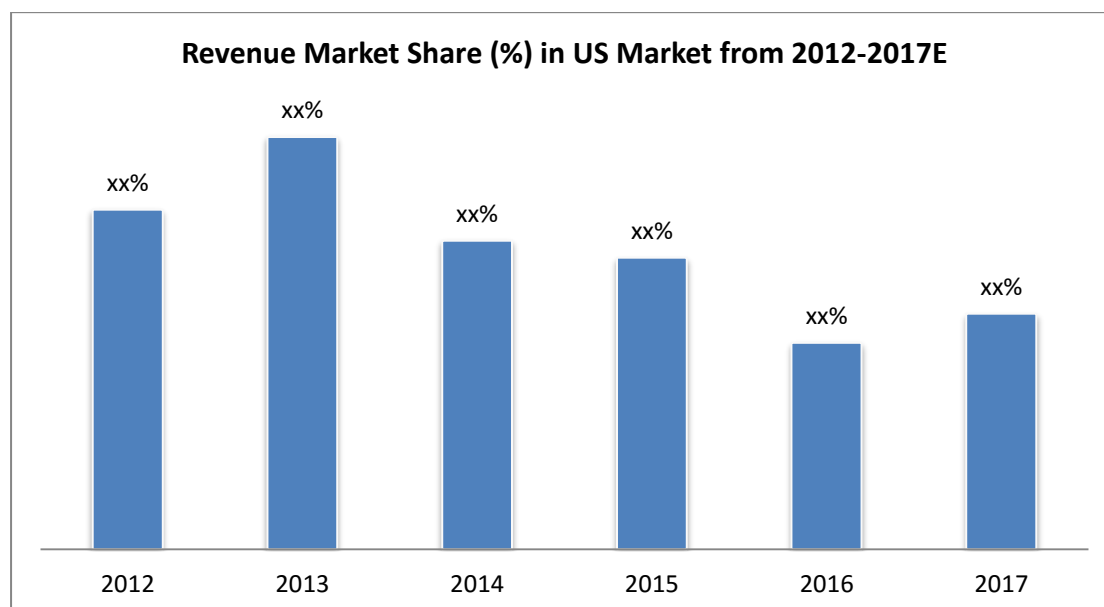
Source: AEP's Polysilicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure AEP's Polysilicon Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: AEP's Polysilicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure AEP's Polysilicon Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: AEP's Polysilicon; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.2.4 Main Business/Business Overview

6.3 Wacker

6.3.1 Company Basic Information, Manufacturing Base and Competitors

Table Wacker Basic Information List

<i>#</i>	<i>Item</i>	<i>Description</i>
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: Wacker; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.3.2 Granular Polysilicon Product Category, Application and Specification

6.3.2.1 Product A

6.3.2.2 Product B

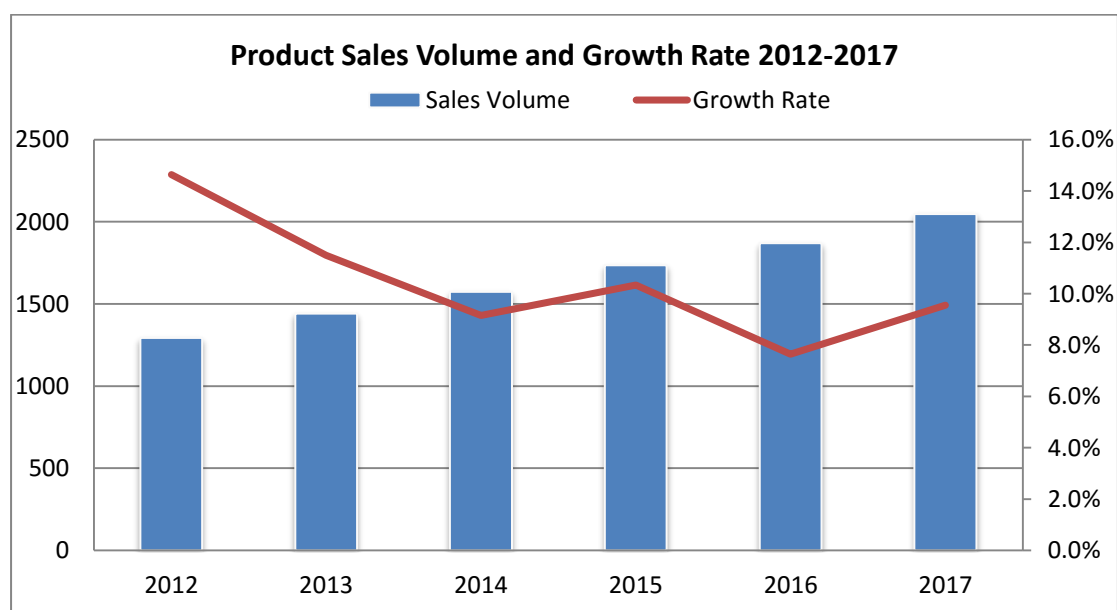
6.3.3 Wacker Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

Table Wacker Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	2012	2013	2014	2015	2016	2017
Sales						
Revenue						
Price						
Gross Margin						

Source: Wacker; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Wacker Granular Polysilicon Sales Growth Rate (%) (2012-2017)



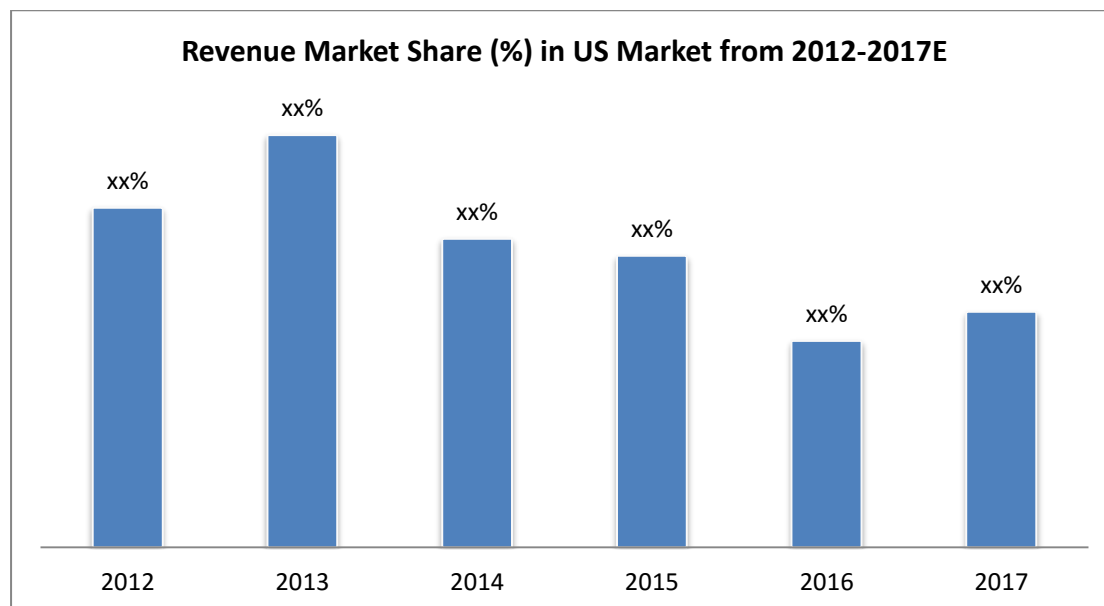
Source: Wacker; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Wacker Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: Wacker; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Wacker Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: Wacker; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.3.4 Main Business/Business Overview

6.4 MEMC

6.4.1 Company Basic Information, Manufacturing Base and Competitors

Table MEMC Basic Information List

#	Item	Description
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: MEMC; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.4.2 Granular Polysilicon Product Category, Application and Specification

6.4.2.1 Product A

6.4.2.2 Product B

6.4.3 MEMC Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

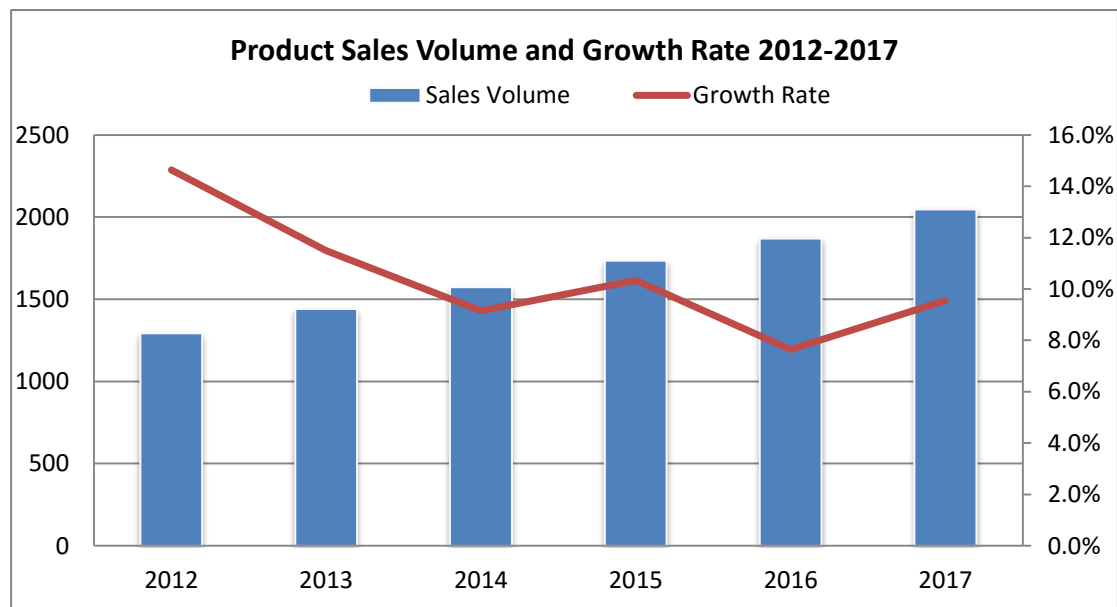
Table MEMC Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	2012	2013	2014	2015	2016	2017
Sales						
Revenue						

Price
Gross Margin

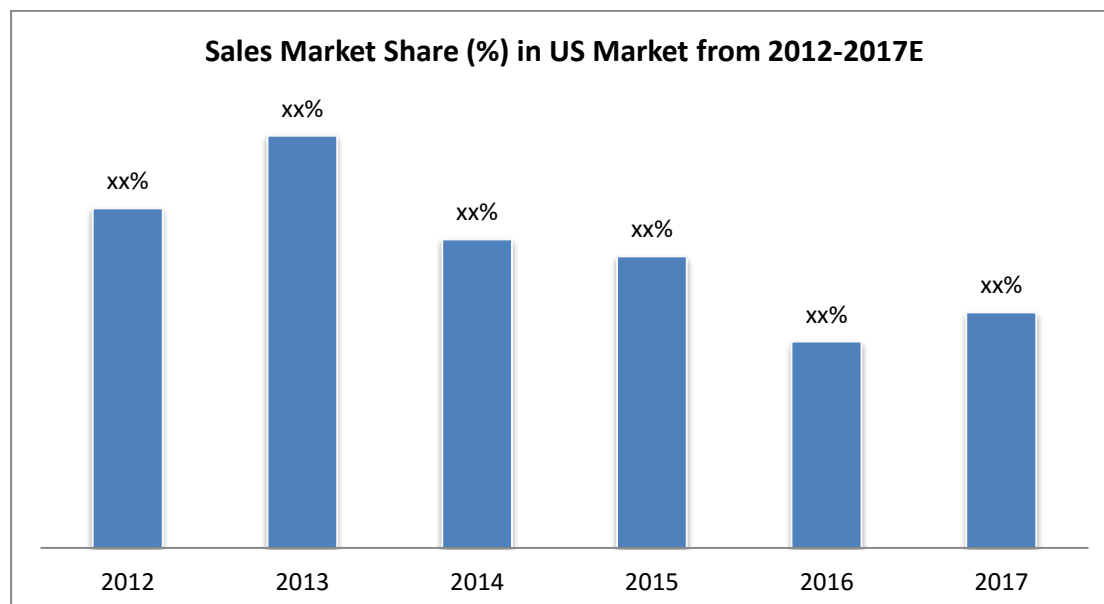
Source: MEMC; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure MEMC Granular Polysilicon Sales Growth Rate (%) (2012-2017)



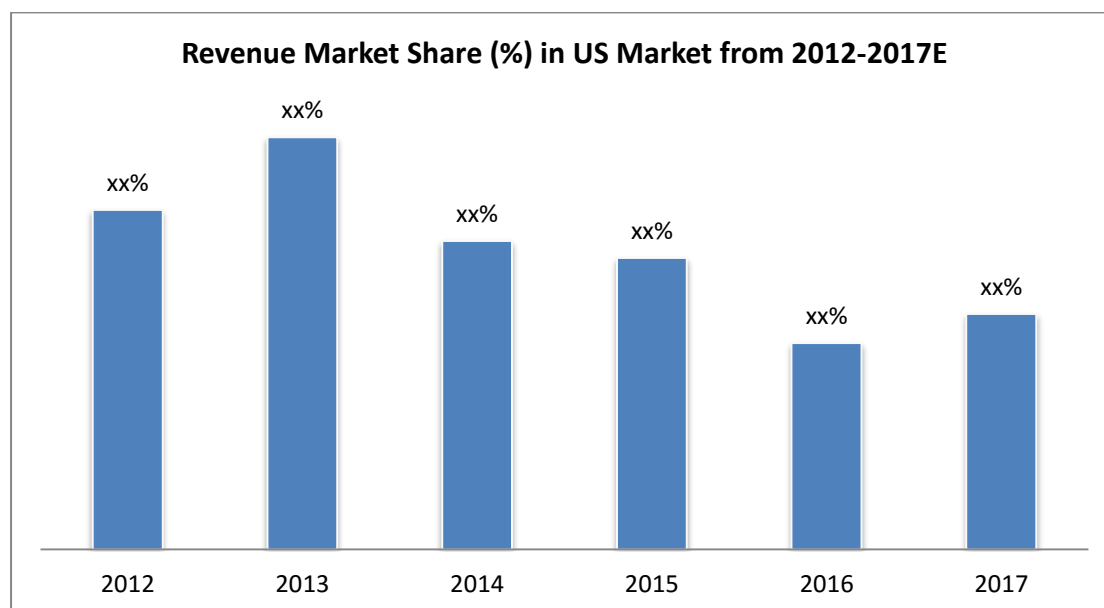
Source: MEMC; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure MEMC Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: MEMC; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure MEMC Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: MEMC; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.4.4 Main Business/Business Overview

6.5 Hemlock

6.5.1 Company Basic Information, Manufacturing Base and Competitors

Table Hemlock Basic Information List

#	Item	Description
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: Hemlock; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.5.2 Granular Polysilicon Product Category, Application and Specification

6.5.2.1 Product A

6.5.2.2 Product B

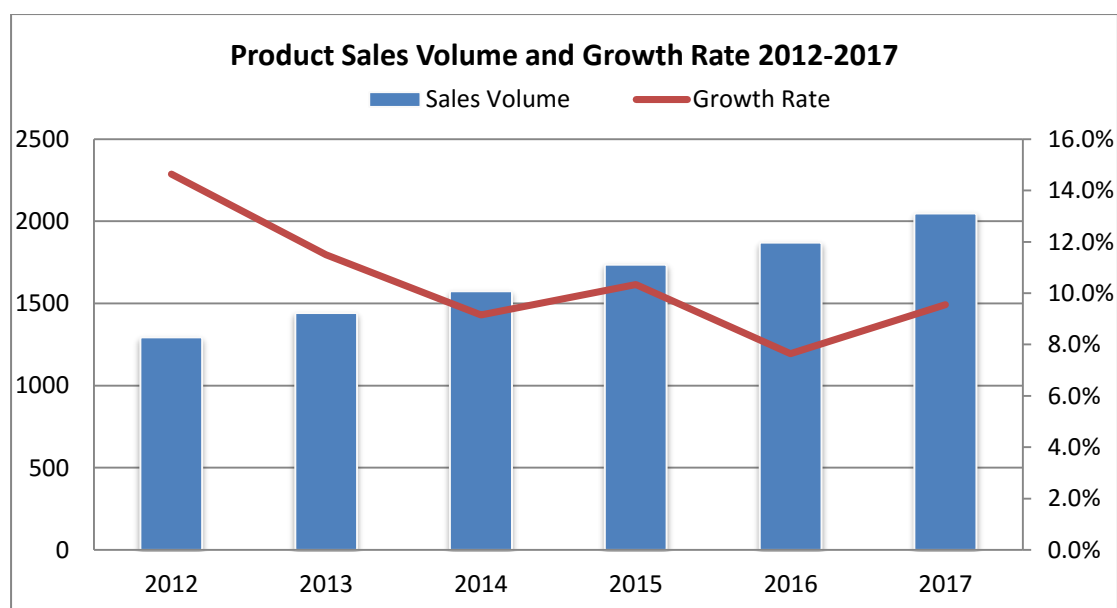
6.5.3 Hemlock Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

Table Hemlock Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	2012	2013	2014	2015	2016	2017
Sales						
Revenue						
Price						
Gross Margin						

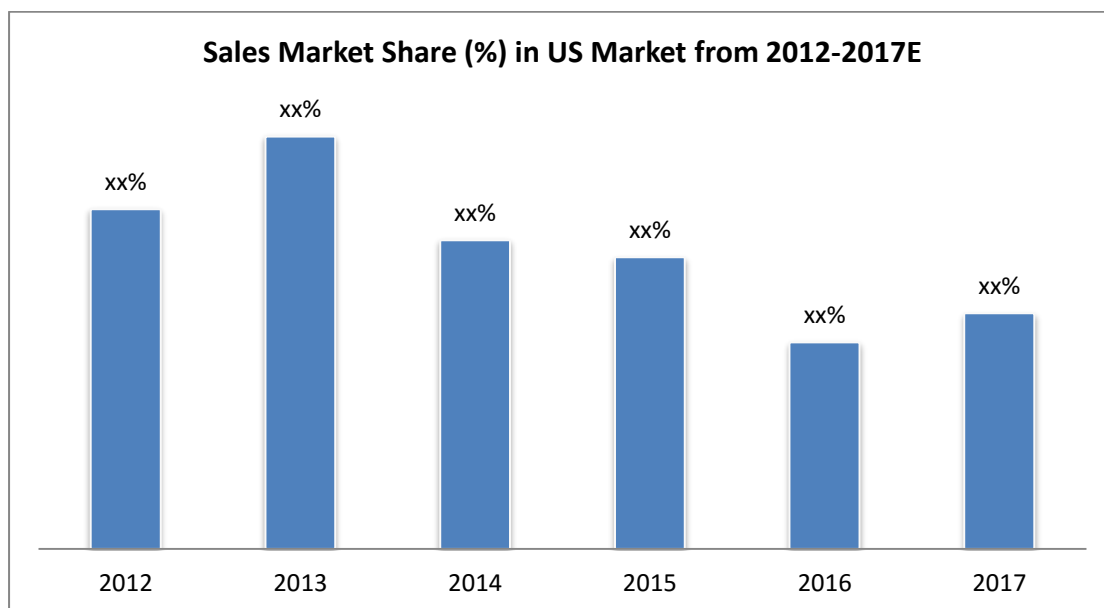
Source: Hemlock; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Hemlock Granular Polysilicon Sales Growth Rate (%) (2012-2017)



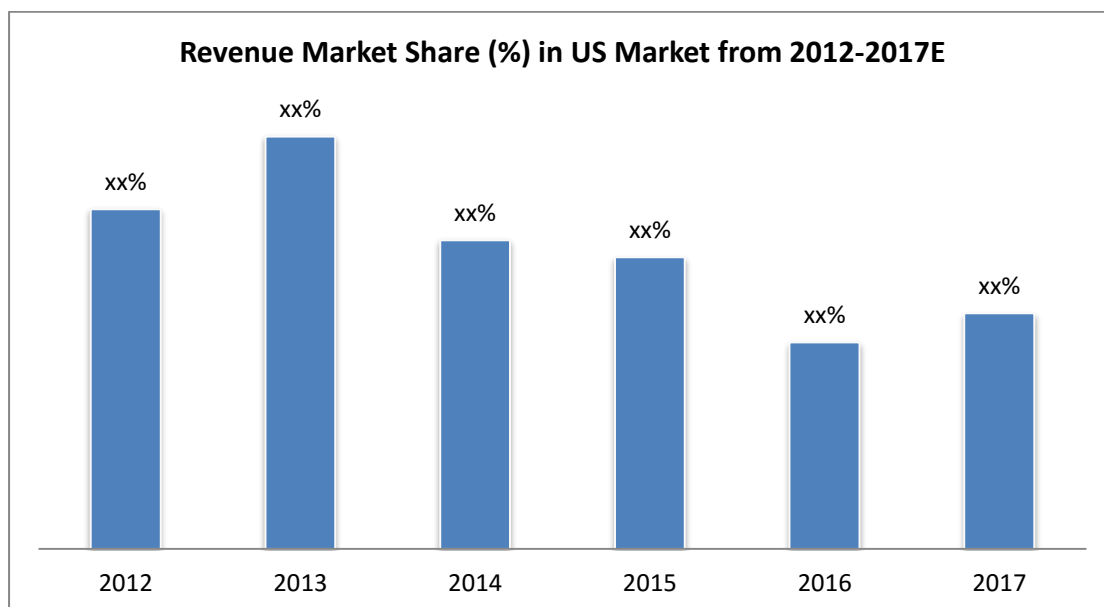
Source: Hemlock; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Hemlock Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: Hemlock; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Hemlock Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: Hemlock; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.5.4 Main Business/Business Overview

6.6 Shaanxi Non Ferrous Tian Hong Rec Silicon Materials

6.6.1 Company Basic Information, Manufacturing Base and Competitors

Table Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Basic Information List

#	Item	Description
1	Company Name	
2	Website	
3	Commercial Production Date of Granular Polysilicon	
4	Manufacturing Locations of Granular Polysilicon	
5	Sales Regions	
6	Economic Activities	
7	Market Position or History	
8	Competitors	
9	Contact Information	

Source: Shaanxi Non Ferrous Tian Hong Rec Silicon Materials; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.6.2 Granular Polysilicon Product Category, Application and Specification

6.6.2.1 Product A

6.6.2.2 Product B

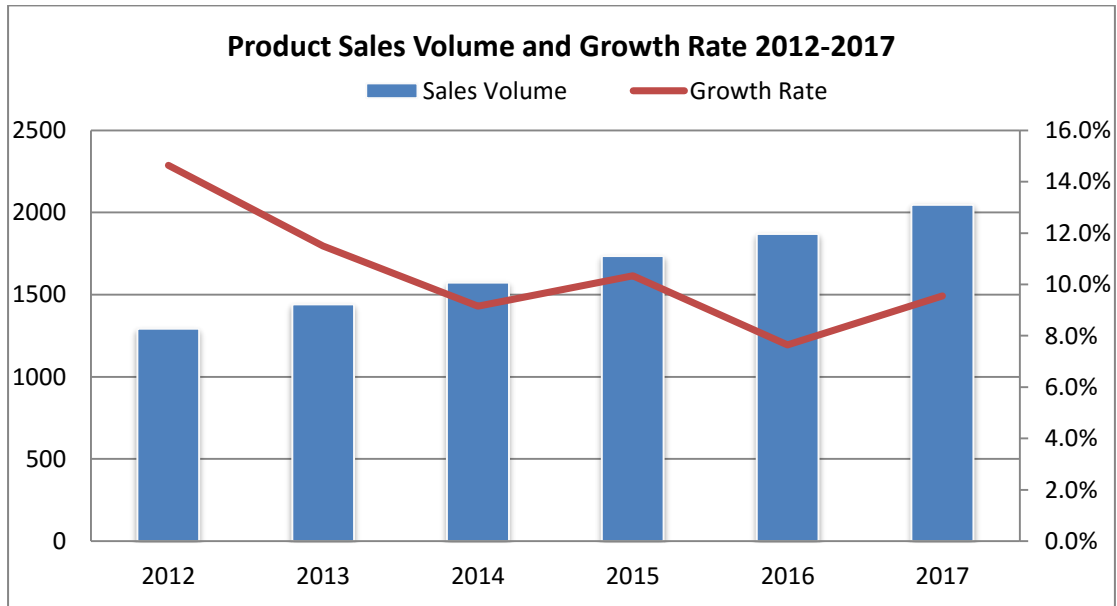
6.6.3 Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

Table Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Granular Polysilicon Sales (MT), Revenue (Million USD), Price (USD/MT) and Gross Margin (%) (2012-2017)

	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
Sales						
Revenue						
Price						
Gross Margin						

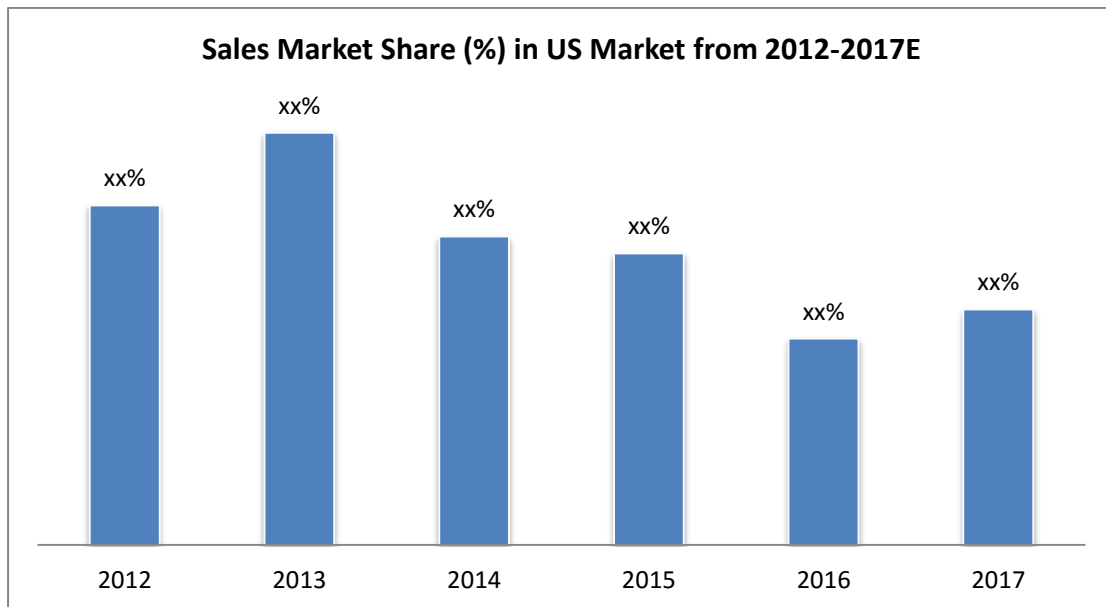
Source: Shaanxi Non Ferrous Tian Hong Rec Silicon Materials; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Granular Polysilicon Sales Growth Rate (%) (2012-2017)



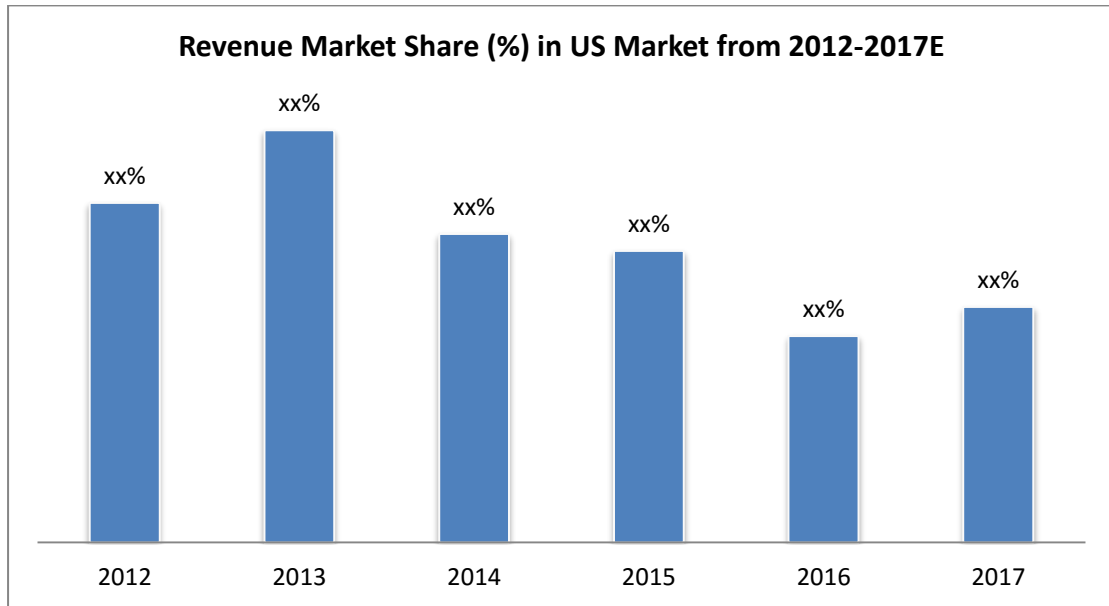
Source: Shaanxi Non Ferrous Tian Hong Rec Silicon Materials; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Granular Polysilicon Sales Market Share (%) in US (2012-2017)



Source: Shaanxi Non Ferrous Tian Hong Rec Silicon Materials; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

Figure Shaanxi Non Ferrous Tian Hong Rec Silicon Materials Granular Polysilicon Revenue Market Share (%) in US (2012-2017)



Source: Shaanxi Non Ferrous Tian Hong Rec Silicon Materials; Secondary Literature, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center, Nov 2017

6.6.4 Main Business/Business Overview

7 Granular Polysilicon Manufacturing

Cost Analysis

7.1 Granular Polysilicon Key Raw Materials Analysis

7.1.1 Key Raw Materials

Table Production Base and Market Concentration Rate of Raw Material

<i>Raw Materials</i>	<i>Production Base</i>	<i>Market Concentration Rate</i>
Raw Material A		
Raw Material B		
...		

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

7.1.2 Price Trend of Key Raw Materials

Figure Price Trend of Key Raw Materials

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

7.1.3 Key Suppliers of Raw Materials

Table Key Suppliers of Raw Materials

	<i>Company</i>	<i>Website</i>	<i>Location</i>
Raw Material A	Supplier 1		
	Supplier 2		
	Supplier 3		
	Supplier 4		
	Supplier 5		
Raw Material B	Supplier 1		
	Supplier 2		
	Supplier 3		

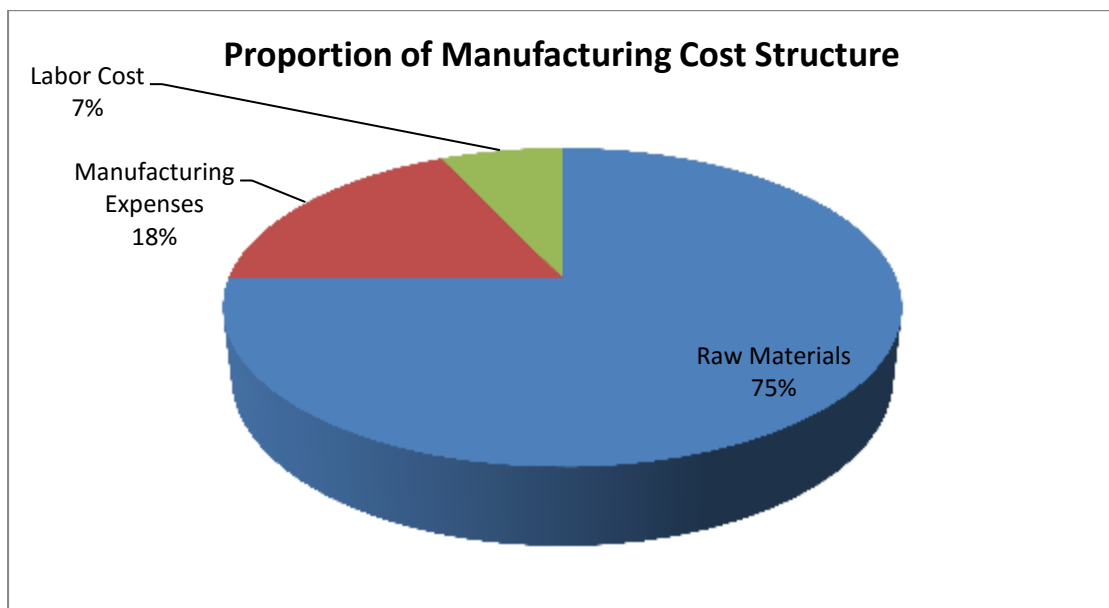
Supplier 4
Supplier 5

Source: Above companies and QYR Chemical & Materials Research Center

7.1.4 Market Concentration Rate of Raw Materials

7.2 Proportion of Manufacturing Cost Structure

Figure Manufacturing Cost Structure of Granular Polysilicon



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

7.2.1 Raw Materials

The raw materials include the direct material, like raw materials, accessory material and packing materials.

7.2.2 Labor Cost

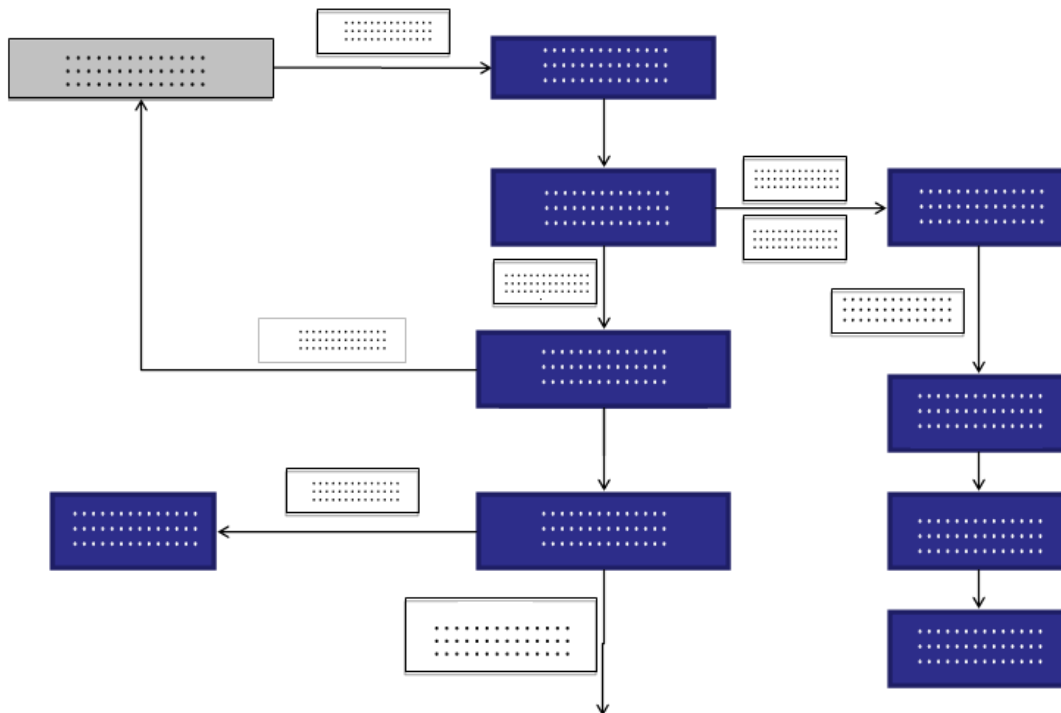
This includes the Direct Labor Costs in production line, like the wages and welfare.

7.2.3 Manufacturing Expenses

This section includes a lot of items, like the depreciation costs for the equipment, plants, staff dormitories and storehouses etc., also includes the energy costs like water and electricity, industrial gas and steam, as well as expenses like Safety and Health, low value consumables and spare parts, sporadic materials.

7.3 Manufacturing Process Analysis of Granular Polysilicon

Figure Manufacturing Process Analysis of Granular Polysilicon



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

8 Industrial Chain, Sourcing Strategy and Downstream Buyers

8.1 Granular Polysilicon Industrial Chain Analysis

Figure Granular Polysilicon Industrial Chain Analysis



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

8.2 Upstream Raw Materials Sourcing

Raw Materials are important component, occupying for the most proportion of cost. It's important and necessary to attach importance to raw materials sourcing. In general, the raw materials need to outsourcing, and the price, on-time rate and quality are very key indicators, to keep competitive market position, to maximize the profit.

Actually, the price, on-time rate or quality, is just one of key factors to influence on the supply capacity and competitiveness. The lowest total production cost is the total index to maximize the profit.

To a producer, can control the total production cost through worldwide procurement, localization procurement and concentrative purchase, more purchasing focuses on fewer suppliers to large-scale purchase, to large-scale and high efficiency. Now the logistics and information is well-developed, beneficial to worldwide procurement,

localization procurement and concentrative purchase. In future, more Players/Manufacturers will attach importance to the raw materials purchasing, with strategic sourcing.

8.3 Raw Materials Sources of Granular Polysilicon

Major Players/Manufacturers in 2015

Table Raw Materials Sources of Granular Polysilicon Major Players/Manufacturers in 2015

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

8.4 Downstream Buyers

Table Major Buyers of Granular Polysilicon

<i>Regions</i>	<i>Buyers</i>	<i>Website</i>
United States		

Source: Above companies; Secondary Sources, Press Releases, Expert Interviews and QYR Chemical & Materials Research Center

9 Marketing Strategy Analysis,

Distributors/Traders

9.1 Marketing Channel

9.1.1 Direct Marketing

9.1.2 Indirect Marketing

9.1.3 Marketing Channel Development Trend

9.2 Market Positioning

9.2.1 Pricing Strategy

9.2.2 Brand Strategy

9.2.3 Target Client

9.3 Distributors/Traders List

Table Distributors/Traders List

<i>Regions</i>	<i>Distributors/Traders Name</i>	<i>Website</i>
United States		

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

10 Market Effect Factors Analysis

10.1 Technology Progress/Risk

10.1.1 Substitutes Threat

10.1.2 Technology Progress in Related Industry

Like the mobile internet,

10.2 Consumer Needs/Customer Preference Change

10.3 Economic/Political Environmental Change

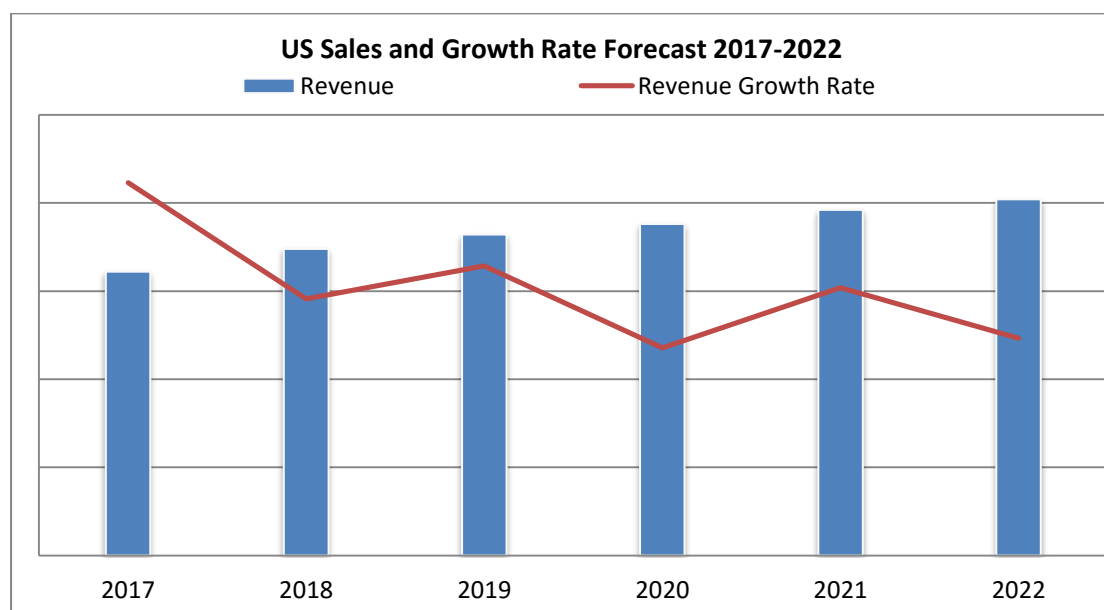
11 United States Granular Polysilicon

Market Size (Sales and Revenue)

Forecast (2017-2022)

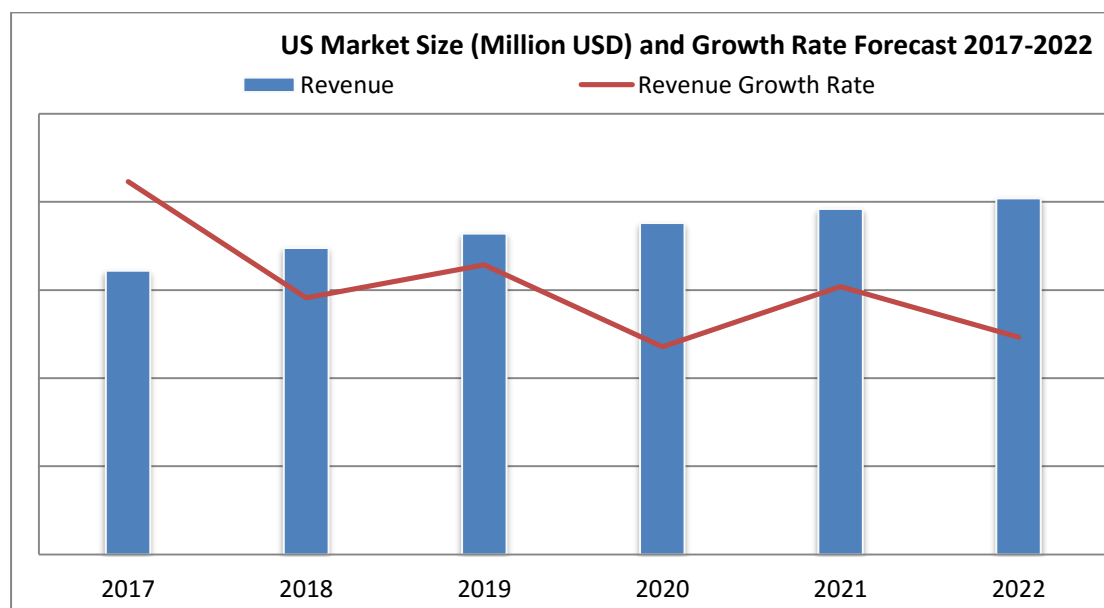
11.1 United States Granular Polysilicon Sales (MT), Revenue (Million USD) Forecast (2017-2022)

Figure United States Granular Polysilicon Sales (MT) and Growth Rate (%) Forecast (2017-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Revenue (Million USD) and Growth Rate Forecast (2017-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Price (USD/MT) Trend Forecast (2017-2022)

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

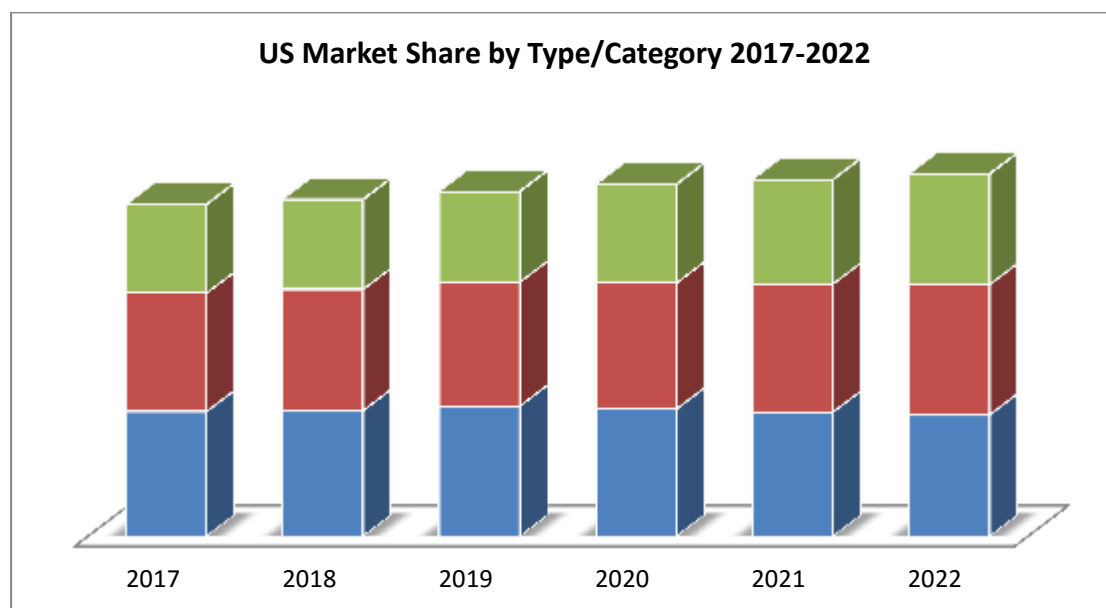
11.2 United States Granular Polysilicon Sales (MT) Forecast by Type (2017-2022)

Table United States Granular Polysilicon Sales (MT) Forecast by Type (2017-2022)

	2017	2018	2019	2020	2021	2022
1–3 mm Diameter						
Others						
...						
Total						

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales (MT) Forecast by Type (2017-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Type in 2022

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

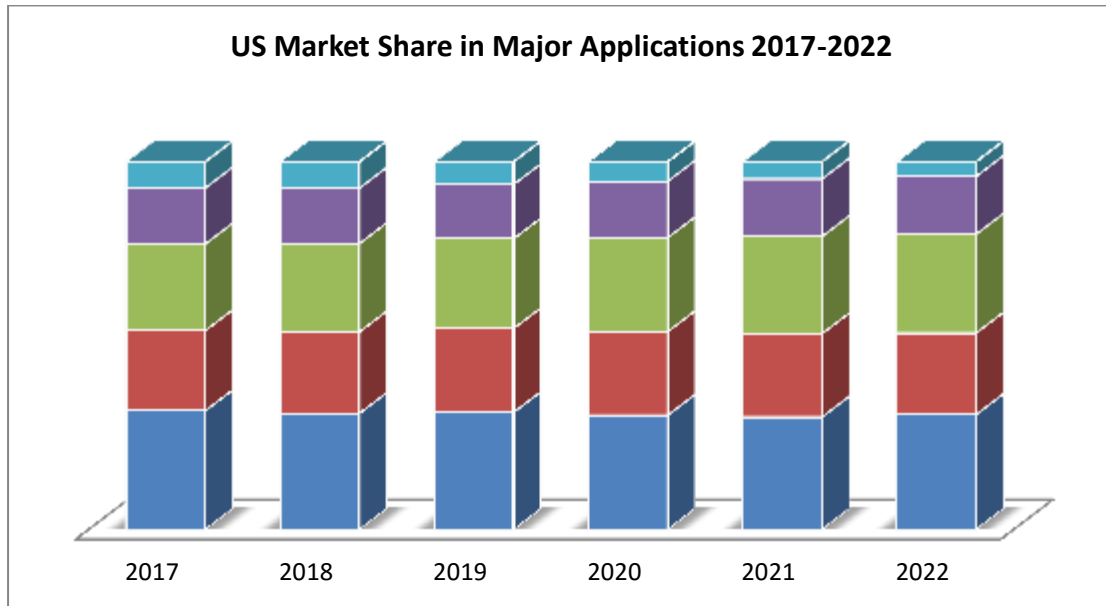
11.3 United States Granular Polysilicon Sales (MT) Forecast by Application (2017-2022)

Table United States Granular Polysilicon Sales (MT) Forecast by Application (2017-2022)

	2017	2018	2019	2020	2021	2022
Solar Photovoltaic (PV) Market						
Others						
...						
Total						

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Application (2017-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Volume Market Share Forecast by Application in 2022

Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

11.4 United States Granular Polysilicon Sales (MT) Forecast by Regions (2017-2022)

Table United States Granular Polysilicon Sales (MT) Forecast by Regions (2017-2022)

	2017	2018	2019	2020	2021	2022
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

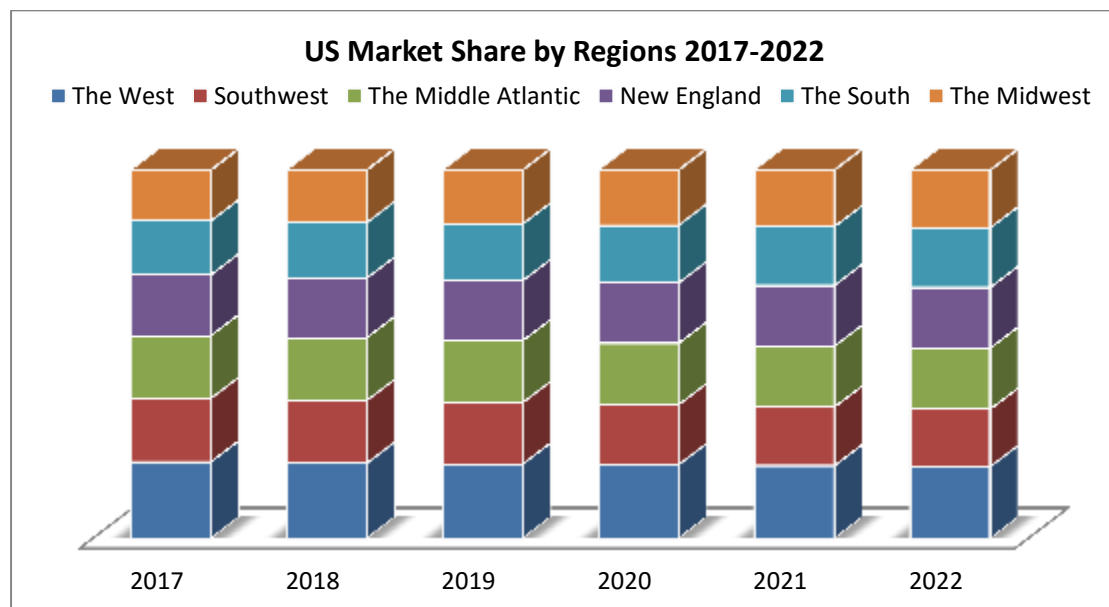
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Table United States Granular Polysilicon Sales Volume Share Forecast by Regions (2017-2022)

	2017	2018	2019	2020	2021	2022
The West						
Southwest						
The Middle Atlantic						
New England						
The South						
The Midwest						
Total						

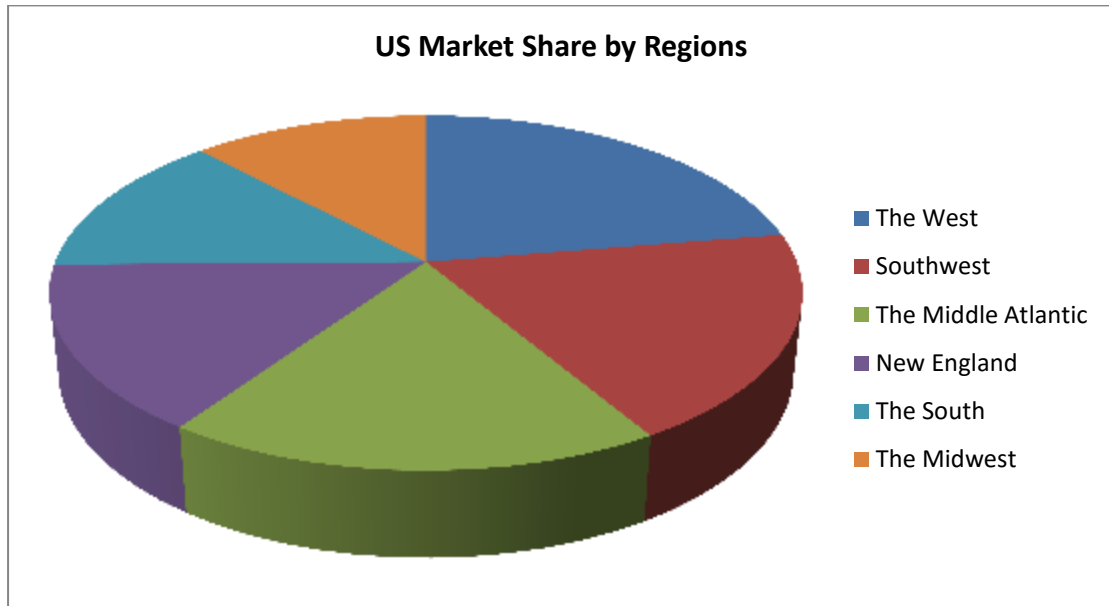
Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Volume Share Forecast by Regions (2017-2022)



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

Figure United States Granular Polysilicon Sales Volume Share Forecast by Regions in 2022



Source: Experts Interview, Secondary Sources and QYR Chemical & Materials Research Center, Nov 2017

12 Research Findings and Conclusion

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This is the end of Granular Polysilicon report.