The Global Market for Distributed Energy Generation

Use this report to:

- Assess and describe the current status of the worldwide distributed energy generation (DG) industry for all major technologies.
- Learn about existing DG technologies and promising technologies under development.
- Analyze the market opportunities that will facilitate the continued global growth of DG.
Highlights

- The global market for distributed generation technologies reached nearly $65.8 billion in 2015. This market is expected to increase from nearly $69.7 billion in 2016 to $109.5 billion in 2021 at a compound annual growth rate (CAGR) of 9.5% for 2016-2021.
- Fuel-based technologies market is expected to grow from $47.4 billion in 2016 to nearly $79.1 billion at a CAGR of 10.8% from 2016 through 2021.
- Distributed renewables market is expected to grow from nearly $22.3 billion in 2016 to $30.4 billion in 2021 at a CAGR of 6.4% from 2016 through 2021.

SUMMARY FIGURE
GLOBAL MARKET FOR DISTRIBUTED GENERATION TECHNOLOGIES, 2015-2021
($ MILLIONS)

To Contact us, click here

Source: BCC Research

Introduction & Scope

INTRODUCTION

STUDY GOALS AND OBJECTIVES

BCC Research’s goal in conducting this study was to assess and describe the current status of the worldwide distributed energy generation (DG) industry for all major technologies, and to assess the potential growth of that industry. More specifically, the study included the following objectives: (1) summarize existing DG technologies and promising technologies under development; (2) evaluate the existing DG industry, focusing on producers of each major viable technology; and (3) assess market potential for DG technologies over a 5-year period, from 2016 through 2021. This report also serves to update a previous report on the same topic that provided projections through 2015.

REASONS FOR COMPLETING THIS STUDY

Driving the development of DG technologies and markets is an increasing global awareness of the many advantages of non-traditional energy generation sources:

- Backup power and energy shortage alternatives.
- Supplemental sources during peak power consumption and grid congestion.
- Use of secondary sources of fuel including renewables and other forms of green energy.
- Improvements in power quality.
- Reductions in greenhouse gas (GHG) emissions.

DG represents one of several potential solutions being widely implemented to address these issues. In many situations, increased reliance on DG sources including solar,
wind, fuel cell and other technologies may be a key component in attaining power service reliability, energy security, and the environmental goals of political entities around the globe. This study assesses market opportunities that will facilitate the continued global growth of DG.

INTENDED AUDIENCE

We have completed a completely revised and updated study - the third iteration of this report over the last decade - of DG technologies which includes relevant market and production information, technological descriptions and issues, applications, market factors and potential, as well as an overview of incentives and regulations in major global markets. This study is of central interest to manufacturers of DG technologies, distributors, suppliers, entrepreneurs and entrepreneurial companies interested in expanding into the DG sector. It will also be of interest to corporate planners and strategists, infrastructure engineering firms and energy market researchers as well as energy/fuel suppliers who are engaged in renewable and alternative energy and fuels production and distribution.

SCOPE OF REPORT

The scope of this investigation includes all major viable DG technologies as well as an abbreviated assessment of potentially viable and emerging DG technologies. BCC Research analyzes each technology, determines its current market status, examines its impact on future markets and presents forecasts of growth over the next five years. Technological issues, including the latest trends, and the industry’s current and projected regulatory environment are assessed and discussed.

BCC Research analyzes the global industry from both a manufacturing and an implementation point of view and examines government roles including regulatory support and requirements, feed-in tariffs and promotional incentives for various DG technologies. The report reviews the most relevant DG technologies, discusses recent trends in capacity installation and unit sales, and provides industry overviews and market assessments for each technology.

Estimated market values presented in the market chapter are based on manufacturers’ total revenues. Projected and forecasted revenue values are in constant U.S. dollars unadjusted for inflation.

GLOBAL MARKETS

The following table provides a review of major global markets assessed for this study.

<table>
<thead>
<tr>
<th>Market</th>
<th>Countries Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>U.S and Canada</td>
</tr>
<tr>
<td>South America</td>
<td>South American countries</td>
</tr>
<tr>
<td>Europe</td>
<td>The EU, Great Britain and Russia</td>
</tr>
<tr>
<td>Asia-Pacific and Australia</td>
<td>China, Japan, South Korea, Southeast Asia, Singapore, Eurasian countries, former Soviet republics and Australia</td>
</tr>
</tbody>
</table>

Source: BCC Research.

INFORMATION SOURCES

Both primary and secondary research methodologies were used in preparing this report. Background information, including reviews of each DG technology and its implementation status, were collected from domestic and international government and industry sources. Specific citations and references are provided as needed to
support this study with website links to government and industry studies, white papers, and other relevant information available to the public.

BCC Research’s research on present and historic market trends was conducted via secondary internet research, direct interviews with industry insiders and both internal and publicly available company data. Annual corporate sales documentation within each sector was also aggregated where relevant to a particular DG technology.

### B

**RESEARCH INFORMATION SOURCES**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Information Source</th>
<th>Primary or Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of distributed energy and technologies</td>
<td>Scientific, government and industry research</td>
<td>Secondary</td>
</tr>
<tr>
<td>Regulatory support for distributed generation</td>
<td>Government documents</td>
<td>Secondary</td>
</tr>
<tr>
<td>Industry structure and market overview</td>
<td>Industry interviews</td>
<td>Primary</td>
</tr>
<tr>
<td>Major companies and company profiles</td>
<td>Industry interviews and published corporate information</td>
<td>Primary and Secondary</td>
</tr>
<tr>
<td>Market assessment and projections</td>
<td>Industry interviews and BCC Research calculations</td>
<td>Primary, Secondary sources used for benchmarking and validation</td>
</tr>
</tbody>
</table>

Source: BCC Research

### METHODOLOGY

Based on the results of our surveys and other data collected in support of this study, BCC Research analyzed the potential applications for each technology and forecast sales through 2021. Market size and installed capacity figures were calculated based on data obtained from these sources. In some cases, when available, data regarding the total percentage of market share represented by surveyed parties and other available data sources were used to provide an estimate of the entire market size and/or installed capacity. Additionally, when available, the data provided in this report were benchmarked against other industry data (these were available for solar and, to a limited extent, for small wind and fuel cells) to ensure relevance, applicability and accuracy.

Market projections were estimated based on a number of sources and factors, particularly those discussed in Chapter 5 as well as relevant regulations and incentives considered in Chapter 4. Projections were tempered at the national level as BCC Research considered national level market factors that were most likely to drive or dampen market development through 2021. Regional factors were also considered in some areas, especially in Europe, where the economies and market development of many individual countries are more closely related than, for example, individual countries in Asia or the Middle East.

### ANALYST’S CREDENTIALS

Robert Eckard, PhD, has 15 years of experience working in the energy and environmental industries and runs a small industry research and technical consulting company with an emphasis on the energy, water and environmental sectors. He has provided economic analyses, market assessments and environmental analyses as well as technical energy and water reports and evaluations to state and local governments, industry organizations and both small-scale and Fortune 500 companies in the U.S., Europe, Asia and Australia.
BCC RESEARCH WEBSITE

The BCC Research website, located at www.bccresearch.com, enables visitors to:

- Conduct keyword searches.
- Examine the complete BCC Research catalog of market research reports and place direct orders.
- Read announcements of recently published reports.
- View titles of near-term upcoming reports.
- Sign up to receive E-mail notifications when reports are published in selected categories.
- Contact BCC Research for additional information.

DISCLAIMER

The information developed in this report is intended to be as reliable as possible at the time of publication and is of a professional nature. This information does not constitute managerial, legal or accounting advice, nor should it be considered as a corporate policy guide, laboratory manual or an endorsement of any product, as much of the information is speculative in nature. BCC Research and the author assume no responsibility for any loss or damage that might result from reliance on the reported information or from its use.

Related Reports

- **CHM031C** Hydrogen As a Chemical Constituent and As an Energy Source.
- **EGY014J** Global Markets and Technologies for Photovoltaic Systems.
- **EGY030C** Air Pollution Control for Coal-Fired Power Plants.
- **EGY033D** World Markets for Bulk Photovoltaic Installation.
- **EGY048D** Solid Oxide Fuel Cells: Technologies and Global Markets.
- **EGY053C** Advanced Materials and Devices for Renewable Energy: Global Markets.
- **EGY055C** Building the Global Hydrogen Economy: Technologies and Opportunities.
- **EGY056C** Utility-Scale Electricity Storage Technologies: Global Markets.
About BCC Research

With our unparalleled 45-year history, BCC Research provides comprehensive analysis of global market sizing, forecasting and industry intelligence, covering markets where advances in science and technology are improving the quality, standard and sustainability of businesses, economies and lives.

BCC Library Access

From market sizing and forecasts, to opportunity assessments and competitive analyses, our ever-expanding library gives you the data, insights and intelligence required to ensure your project is a success. With myriad options for access to fit all needs and budgets, call 866-285-7215 or email info@bccresearch.com to request a demo.

BCC Custom Research

Our experts provide custom research projects to those working to identify new markets, introduce new products, validate existing market share, analyze competition and assess the potential for products to impact existing markets. With impressive academic credentials and broad and deep knowledge of global industrial markets, our independent analysts and consultants develop the facts, figures, analysis and assessments to inform the decisions that will move your company ahead. Confidential inquiries to: custom@bccresearch.com or 781-205-2429.

To place an order for
The Global Market for Distributed Energy Generation
call (+1) 781-489-7301

March 2017
Report ID: EGY061C