

By Denise Ernst, Senior Analyst, Parks Associates

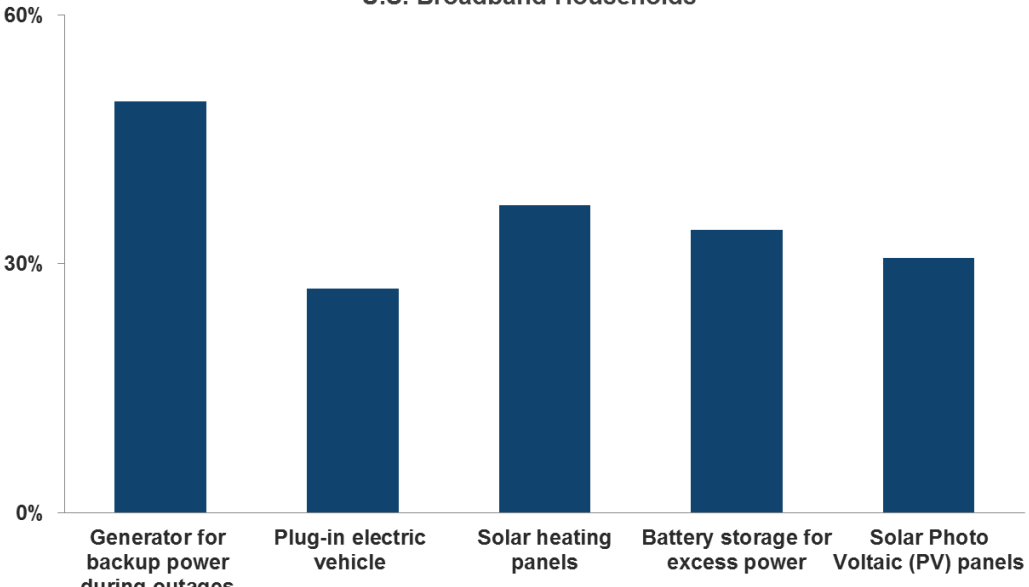
<p>Synopsis</p> <p>California Title 24 sets bold goals for all residential new construction to achieve zero net energy by 2020, creating market opportunities for home energy management solutions. This report outlines home energy management opportunities, including strategies for solar industry players to expand their offerings. It provides an overview of cost effectiveness evaluations being made by builders and the tradeoffs associated with different energy-efficiency investments.</p>	<p style="text-align: center;">Consumer Perceptions of DER Products</p> <p style="text-align: center;">Perceived High Value of Energy Products U.S. Broadband Households</p>  <p style="text-align: right;">© Parks Associates</p>
<p>Publish Date: 2Q 18</p>	<p>“Smart home products do exist in the ZNE house, but they are not offered consistently, as energy savings is not the primary focus of many smart home devices. Smart thermostats, smart plugs and smart lighting have the ability to save energy. Demonstrating energy reduction through Energy Star® certification and working with the building standards group to be included in future codes and then communicating those results to architects and builders can drive smart product adoption in the ZNE home sector,” said Denise Ernst, Senior Analyst, Parks Associates.</p>
<p>Contents</p>	<ul style="list-style-type: none"> 1.0 Report Summary <ul style="list-style-type: none"> 1.1 Purpose of Report 1.2 Scope of Report 1.3 Key Questions Addressed 1.4 Research Approach/Sources 2.0 Home Energy: Intentions vs. Actions 3.0 Zero Net Energy: An Idea Becomes Reality <ul style="list-style-type: none"> 3.1 Defining Zero Net Energy (ZNE) 3.2 Achieving ZNE: Energy Efficiency and Construction 4.0 California’s ZNE Program: Goals, Policies, Lessons <ul style="list-style-type: none"> 4.1 California’s Aggressive Goals 4.2 2019 Title 24, Part 6 Residential Building Efficiency Standards 4.3 Title 24, Part 6: Mandatory, Prescriptive and Performance

TABLE OF CONTENTS

	<ul style="list-style-type: none"> 4.4 Alignment and Action 4.5 Saving Energy Can Stress the Infrastructure <ul style="list-style-type: none"> 4.5.1 Storage 4.6 Behavior is Widely Variable <ul style="list-style-type: none"> 4.6.1 ZNE Doesn't Solve our MELs Addiction 5.0 Beyond California <ul style="list-style-type: none"> 5.1 Policies, Codes, and Legislation 5.2 Consumers 5.3 Builders: Embracing and Differentiating <ul style="list-style-type: none"> 5.3.1 Company Profile: Meritage Homes 5.4 Partnerships <ul style="list-style-type: none"> 5.4.1 Project Profile: Mandalay Homes and sonnen 5.5 Obstacles <ul style="list-style-type: none"> 5.5.1 Low Energy Costs 5.5.2 Incentives and Availability of Products and Support 5.5.3 Budgets and Awareness 5.5.4 Utilities and Municipalities 6.0 Trends to Watch <ul style="list-style-type: none"> 6.1 Electrification and Factory Built 6.2 ZNE Communities and Existing Buildings 7.0 Market Opportunities <ul style="list-style-type: none"> 7.1 What Resonates with Home Buyers? 7.2 After the Purchase: Willingness to Buy and Upgrade 7.3 Smart Home Products 8.0 Implications and Recommendations 9.0 Appendix <ul style="list-style-type: none"> 9.1 Glossary: 9.2 Index 9.3 Image Sources
Figures	<ul style="list-style-type: none"> Importance of Having an Energy Efficient Home Graphic Definition of Zero Net Energy The Process of Achieving a Zero Net Energy Home California's Residential Electricity Use per Person Impact of Building Standards on Home Energy Use Daily Load Profile of Different Residential Customers Load Profile of High Peak Usage with Battery Storage Distributed Energy Familiarity, Perceived Value, and Affordability Case Study of ZNE Multifamily Energy Use California Energy Commission Residential Energy and Peak Load Forecasts 2013-2026 Energy Efficiency Consumer Segmentation Average Monthly Electricity Bill Planning and Partnerships for Advanced Energy Communities Annual Spending Habits of Home Owners Smart Home Device Ownership

TABLE OF CONTENTS

List of Companies		
	Amazon Home Services Arizona Eco-Development Best Buy Geek Squad Colorado Clean Energy Cluster Energiesprong FortZED Hello Tech	Mandalay Homes Meritage Homes National Association of Home Builders PG&E PulteGroup, Inc sonnen Toyota

Attributes		
Parks Associates 5080 Spectrum Drive Suite 1000W Addison, TX 75001 800.727.5711 toll free 972.490.1113 phone 972.490.1133 fax parksassociates.com sales@ parksassociates.com	Authored by Denise Ernst Executive Editor: Tricia Parks Published by Parks Associates © June 2018 Parks Associates Dallas, Texas 75001 All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher. Printed in the United States of America. Disclaimer Parks Associates has made every reasonable effort to ensure that all information in this report is correct. We assume no responsibility for any inadvertent errors.	