The Changing Energy Landscape and its impact on economic development in America
The Changing Energy Landscape
And its Impact on Economic Development in America
International Economic Development Council

IEDC is the world’s largest membership organization serving the economic development profession, with more than 5,000 members and a network of more than 25,000 economic development professionals and allies. From public to private, rural to urban, and local to international, our members represent the entire range of economic development experience. Through a range of services including conferences, training courses, webinars, publications, research and technical assistance efforts, we strive to provide cutting-edge knowledge to the economic development community and its stakeholders. For more information about IEDC, visit www.iedconline.org.

Craig J. Richards, CEcD, FM
President & CEO
Tampa Hillsborough Economic Development Corporation, FL
2018 Chairman of the Board, IEDC

Michael Langley, FM, HLM
President & CEO
Greater Minneapolis Saint Paul Regional Economic Development Partnership, MN
2017 Chairman of the Board, IEDC

Jeffrey A. Finkle, CEcD
President & CEO
International Economic Development Council

© Copyright 2018 International Economic Development Council
The EDRP Program is the “think tank” component of IEDC, designed to help economic development professionals weather the challenges and grab opportunities from economic changes affecting our communities. EDRP members are leaders in the field of economic development, working through this program to improve the knowledge and practice of the profession. IEDC would like to thank the Economic Development Research Partners program for providing the impetus and resources for this project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Organization</th>
<th>City/State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark J. James, CEcD</td>
<td>Vice President, Economic and Business Development</td>
<td>American Electric Power Company, OH</td>
</tr>
<tr>
<td>Ronnie Bryant, CEcD, FM, HLM</td>
<td>President &amp; CEO</td>
<td>Charlotte Regional Partnership, NC</td>
</tr>
<tr>
<td>Jerry Stewart, CEcD</td>
<td>Workforce Development Coordinator</td>
<td>City of Virginia Beach Economic Development, VA</td>
</tr>
<tr>
<td>Paul Krutko, FM, HLM</td>
<td>President &amp; CEO</td>
<td>Ann Arbor SPARK, MI</td>
</tr>
<tr>
<td>Charles Wood, CEcD</td>
<td>Vice President, Economic Development</td>
<td>Chattanooga Area Chamber of Commerce, TN</td>
</tr>
<tr>
<td>Kenny McDonald, CEcD</td>
<td>Chief Economic Officer</td>
<td>Columbus 2020!, OH</td>
</tr>
<tr>
<td>Bryan Daniels, CEcD</td>
<td>President &amp; CEO</td>
<td>Blount Partnership, TN</td>
</tr>
<tr>
<td>Allison Thompson, CEcD, EDFP</td>
<td>Director of Economic Development</td>
<td>City of Cedar Hill Economic Development, TX</td>
</tr>
<tr>
<td>SeonAh Kendall</td>
<td>Economic Health Manager</td>
<td>City of Fort Collins Economic Health Office, CO</td>
</tr>
<tr>
<td>Robert Camoin, CEcD</td>
<td>President &amp; CEO</td>
<td>Camoin Associates, Inc., NY</td>
</tr>
<tr>
<td>Quinten L. Harris JD, MPA</td>
<td>Deputy Director of Jobs and Economic Development</td>
<td>City of Columbus Department of Development, OH</td>
</tr>
<tr>
<td>Ron Patterson</td>
<td>Interim President</td>
<td>Frisco Economic Development Corp., TX</td>
</tr>
<tr>
<td>Andra Cornelius, CEcD</td>
<td>Senior Vice President, Business &amp; Workforce Development</td>
<td>CareerSource Florida, Inc., FL</td>
</tr>
<tr>
<td>Jennifer Graves, CEcD</td>
<td>Deputy Director</td>
<td>Gilbert Office of Economic Development, AZ</td>
</tr>
<tr>
<td>Kurt Chilcott, CEcD, FM, HLM</td>
<td>President &amp; CEO</td>
<td>CDC Small Business Finance Group, CA</td>
</tr>
<tr>
<td>SeonAh Kendall</td>
<td>Economic Health Manager</td>
<td>City of Fort Collins Economic Health Office, CO</td>
</tr>
<tr>
<td>Molly Howey, CEcD</td>
<td>Senior Vice President for Economic Development</td>
<td>GO Topeka Economic Partnership, KS</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Company/Region</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Brett Doney, CEcD, FM</td>
<td>President &amp; CEO</td>
<td>Great Falls Development Authority, Inc., MT</td>
</tr>
<tr>
<td>Regina Lindsey, CEcD</td>
<td>CEO &amp; President</td>
<td>Greater Beaumont Chamber of Commerce, TX</td>
</tr>
<tr>
<td>David Maahs, CEcD</td>
<td>Executive Vice President</td>
<td>Greater Des Moines Partnership, IA</td>
</tr>
<tr>
<td>Robert Swindell</td>
<td>President &amp; CEO</td>
<td>Greater Fort Lauderdale Alliance, FL</td>
</tr>
<tr>
<td>Jason Ford, CEcD</td>
<td>Vice President, Regional</td>
<td>Greater Houston Partnership, TX</td>
</tr>
<tr>
<td>Michael Langley, FM, HLM</td>
<td>President &amp; CEO</td>
<td>Greater Minneapolis Saint Paul Regional Economic Development Partnership, MN</td>
</tr>
<tr>
<td>William Foreman</td>
<td>Executive Vice President</td>
<td>Greater Oklahoma City Chamber, OK</td>
</tr>
<tr>
<td>Barry Matherly, CEcD, FM, HLM</td>
<td>President &amp; CEO</td>
<td>Greater Richmond Partnership, Inc., VA</td>
</tr>
<tr>
<td>Julie Engel, CEcD</td>
<td>CEO &amp; President</td>
<td>Greater Yuma Economic Development Corp., AZ</td>
</tr>
<tr>
<td>Rick L. Weddle, FM, HLM</td>
<td>President &amp; CEO</td>
<td>Hampton Roads Economic Development Alliance, VA</td>
</tr>
<tr>
<td>Stephanie Cook</td>
<td>Program Manager</td>
<td>Idaho National Laboratory, ID</td>
</tr>
<tr>
<td>Eloisa Klementich, CEcD</td>
<td>President &amp; CEO</td>
<td>Invest Atlanta, GA</td>
</tr>
<tr>
<td>Thomas Kucharski, CEcD</td>
<td>President &amp; CEO</td>
<td>Invest Buffalo Niagara, NY</td>
</tr>
<tr>
<td>Catherine Chambers</td>
<td>Senior Vice President,</td>
<td>JAXUSA, FL</td>
</tr>
<tr>
<td>Matt Waldo</td>
<td>Manager, Research &amp;</td>
<td>JobsOhio, OH</td>
</tr>
<tr>
<td></td>
<td>Information</td>
<td></td>
</tr>
<tr>
<td>Amy Clickner, CEcD, CFRM</td>
<td>CEO</td>
<td>Lake Superior Community Partners, MI</td>
</tr>
<tr>
<td>Jonas Peterson, CEcD</td>
<td>President &amp; CEO</td>
<td>Las Vegas Global Economic Alliance, NV</td>
</tr>
<tr>
<td>William Allen</td>
<td>President &amp; CEO</td>
<td>Los Angeles County Economic Development, CA</td>
</tr>
<tr>
<td>Donald Pierson</td>
<td>Secretary</td>
<td>Louisiana Department of Economic Development, LA</td>
</tr>
<tr>
<td>John Osborne</td>
<td>CEO &amp; President</td>
<td>Lubbock Economic Development Alliance, TX</td>
</tr>
<tr>
<td>Paul Jadin, CEcD</td>
<td>President</td>
<td>Madison Region Economic Partnership, WI</td>
</tr>
<tr>
<td>Darrell Auterson, CEcD, EDFP, FM</td>
<td>Former President &amp; CEO</td>
<td>McKinney Economic Development Corp., TX</td>
</tr>
</tbody>
</table>
Susan Proctor
Director, Global Business Attraction
Michigan Economic Development Corp., MI

Kevin McKinnon
Deputy Commissioner
Minnesota Department Employment & Economic Development, MN

Jay Moon, CEcD, FM, HLM
President & CEO
Mississippi Manufacturers Association, MS

Michael Meek, CEcD
President
New Braunfels Economic Development Council, TX

Scott Martinez, CEcD
President
North Louisiana Economic Partnership, LA

John Sampson
President & CEO
Northeast Indiana Regional Partnership, IN

Irene Spanos
Director, Economic Development & Community Affairs
Oakland County Executive Office, CA

Will Sproull, FM, HLM
President & CEO
Richardson Economic Development Partnership, TX

Lyneir Richardson
Executive Director
Rutgers Center for Urban Entrepreneurship and Economic Development, NJ

JoAnn Crary, CEcD, FM, HLM
President
Saginaw Future Inc., MI

Lara Fritts, CEcD
Director, Economic Development Department
Salt Lake City Corp., UT

Ron Kitchens, CEcD
Senior Partner
Southwest Michigan First, MI

Rodney Crim, CEcD, EDFP
President
St. Louis Economic Development Partnership, MN

James Alexander
Senior Vice President
St. Louis Regional Chamber, MN

Craig Richard, CEcD, FM
President & CEO
Tampa Hillsborough Economic Development Corp., FL

Christine Nelson
Vice President, Regional Business Development
Team NEO, OH

Robert Allen
President & CEO
Texas Economic Development Corp., TX

Lou Ann Nisbett, CEcD
President & CEO
Economic Development Alliance for Jefferson County, AR

Birgit Klohs, HLM
President & CEO
The Right Place, Inc., MI

Mike Neal, CCE, CCD
President & CEO
Tulsa Regional Chamber, OK

Stephen Moret
President & CEO
Virginia Economic Development Partnership, VA
Acknowledgements

IEDC would like to thank the Economic Development Research Partners task force that provided direction for this paper:

Amy Clickner, CEcD, CFRM - 2017 EDRP Chair
Rick L. Weddle, FM, HLM - 2018 EDRP Chair
David Maahs, CEcD - EDRP Task Force Chairman
Mark J. James, CEcD - EDRP Task Force Vice Chairman
Birgit Klohs, HLM
Quinten L. Harris JD, MPA
John Osborne
Lou Ann Nisbett, CEcD

We would also like to thank the many communities from across America that shared their stories, as well as GIS WebTech, which generously donated time and expertise to create the ArcGIS maps that illustrate the Changing Energy Landscape.
# Table of contents

I. The changing energy landscape .............................................. 9

II. Coal as a cornerstone .......................................................... 11
   - Case study: Regional strategy – Appalachian Sky .................. 17
   - Case study: Removing geographical barriers – SoloWorks, New Mexico ........................................... 18
   - Case study: Utility companies as partners – American Electric Power .................................................. 20

III. Nuclear energy: headed for change ........................................ 22
   - Case study: Vermont Yankee ................................................. 30
   - Case study: Understanding the issues for long-term planning – Pilgrim Nuclear Power Station, Plymouth, Massachusetts ......................................................... 34
   - Case study: Crises inspires cross-community consultation – Diablo Canyon, California ......................... 36

IV. Oil and natural gas ................................................................. 38
   - Case study: America’s oil powerhouse – Texas ................................................................. 50
   - Case study: North Louisiana and the Haynesville Shale .................................................................. 53
   - Case study: Calvert County and Dominion Cove Point, Maryland ................................................. 54
   - Case study: The Eagle Ford Shale Community Development Program – Texas ......................... 60
   - Case study: Working with state partners to overcome infrastructure challenges – Hampton Roads, Virginia ................................................................. 61

V. Renewable energy .................................................................. 63
   - Case study: Using incentives as a catalyst for growth in Buffalo, New York ........................................ 73
   - Case study: Harnessing renewable energy to attract high-tech investment in Iowa .......................... 74
   - Case study: Community sustainability for talent retention, business attraction – Fort Collins (CO) ...... 75

VI. What economic developers should know .................................. 77

VII. Appendix ............................................................................. 78
I. The changing energy landscape

The story of American economic development is also the story of energy. The fortunes of communities have risen and fallen as new technology has unleashed growth and old methods have lost competitiveness. This reality continues to play out, with major implications for rural communities, regions, cities and states.

*The Changing Energy Landscape and its Impact on Economic Development in America*, a report from IEDC’s Economic Development Research Partners, takes stock of these seismic trends and looks beyond the horizon toward America’s energy future. *The Changing Energy Landscape* is divided into four chapters focused on coal, nuclear, oil and natural gas, and renewable energy.

Long the cornerstone of America’s energy market, coal’s gradual decline, and the fortunes of communities dependent on mining jobs, have seized national headlines and the attention of policymakers. What many perceive as a sudden downturn has in fact been a slow and steady decline for more than two decades. At least 21 states are coping with job losses and disinvestment as this once-dominant energy source falls out of favor. This includes not just rural Appalachia but places from Illinois to Wyoming. For energy-rich communities that did not need a true economic development office for decades, the foremost priority now is to diversify, and diversify fast. Retraining the displaced coal workforce remains a stubborn challenge, but many initiatives are showing promise.

More than any other factor, it’s the fracking revolution that is most responsible for coal’s eroding market share. What has been bad news for coal communities has been good news for shale regions, which are now in boom times. Thanks to hydraulic fracturing technology, these communities are also struggling to keep up with explosive growth and the sudden stress placed on public services. Fracking has unlocked previously unreachable oil and natural gas deposits, further solidifying the United States as a world energy power and inching it ever closer to energy independence. The paper discusses methods oil-rich states are using to create and refine trust funds that help communities weather price drops for this ever-volatile commodity.

While the decline of coal has dominated national attention, there’s a quieter crisis on the horizon for another kind of energy community – those with nuclear power plants. American nuclear reactors are aging, and in addition to requiring costly renovations, many are losing ground to cheaper energy providers, namely natural gas. A nuclear plant closure presents challenges far beyond the loss of a typical primary employer. Reactors are usually located in rural areas, and account for a large share of surrounding communities’ highest-paying jobs. And because the property must house radioactive waste for many years, redeveloping the site is not possible. And unlike, say, a military base closure, there’s no federal agency to come in and help.

“Nobody owns this problem,” said Adam Grinold, executive director of the Brattleboro Development Credit Corporation in Vermont, at IEDC’s FED Forum in March. It fell on Grinold and his organization to champion diversification efforts after the closure of the Vermont Yankee Nuclear Power Plant. Luckily, his organization anticipated the closure years in advance and had a strategy in place. Grinold cautioned other nuclear communities to “plan early, plan loudly, and implement, implement, implement.”