Connecticut’s Economic Outlook

Connecticut Power & Energy Society Annual Conference
October 24, 2018
About CERC

• CERC drives economic development in Connecticut by providing research-based data, planning and implementation strategies to foster business formation, recruitment and growth.

• Private, nonprofit organization; founded in 1992

• Funded by utility and telecommunication companies, state contracts, and fee-based services

• Provides research, municipal, business, real estate, and marketing services
Overview

• Connecticut’s Economic Trends
• Industry Changes Affecting Connecticut Businesses
• Energy Sector Considerations
CT Resident Population

In Thousands

Source: U.S Census Bureau
Components of Population Change Pre- and Post-recession

- Births
- Deaths
- Net International Migration
- Net Domestic Migration

CT Native and Foreign Born

Source: U.S Census Bureau
# CT Population by Age

<table>
<thead>
<tr>
<th>Year</th>
<th>Below 25</th>
<th>25-49</th>
<th>50-74</th>
<th>74 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
</tr>
<tr>
<td>2011</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
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<tr>
<td>2012</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
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<tr>
<td>2013</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
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<tr>
<td>2014</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
</tr>
<tr>
<td>2015</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
</tr>
<tr>
<td>2016</td>
<td>32%</td>
<td>32%</td>
<td>32%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: U.S Census Bureau
Millennials are more likely to live with their parents

Source: BofA Merrill Lynch Global Research, Census Bureau
Education Attainment: CT and U.S.

Education Attainment for Population 25 and over, 2016

- Less than 9th grade
- 9th to 12th grade, no diploma
- High school graduate
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Graduate or professional degree

Source: U.S. Census American Community Survey
Education Attainment: CT and Cities

2016 Educational Attainment by Cities and State

Source: American Community Survey
CT Median Household Income

Source: U.S Census Bureau
CT Housing Permits

Source: U.S Census Bureau
CT Establishments

Source: CT Department of Labor
Industry Trends Affect Business Competitiveness

• Construction: higher commodity costs; increased technical processes change demands for workers

• Financial services: user-friendly online interface, fewer/no local bankers, international expansion

• Manufacturing: automation processes change demands for workers

• Retail: importance of user experience, 25% of U.S. malls projected to close by 2022

• Warehousing: rapid delivery of smaller packages to many users instead of pallets of same goods to businesses

Sources: Credit Suisse, World Economic Forum
## CT Employment Changes by Major Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>2017 Employment</th>
<th>12-14</th>
<th>14-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care and social assistance</td>
<td>267,590</td>
<td></td>
<td></td>
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<tr>
<td>Total Government</td>
<td>227,238</td>
<td></td>
<td></td>
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<tr>
<td>Retail trade</td>
<td>183,501</td>
<td></td>
<td></td>
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<tr>
<td>Manufacturing</td>
<td>158,810</td>
<td></td>
<td></td>
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<tr>
<td>Accommodation and food services</td>
<td>128,235</td>
<td></td>
<td></td>
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<tr>
<td>Finance and insurance</td>
<td>106,207</td>
<td></td>
<td></td>
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<tr>
<td>Professional and technical services</td>
<td>96,354</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative and waste management</td>
<td>89,707</td>
<td></td>
<td></td>
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<tr>
<td>Other services, except public administration</td>
<td>64,284</td>
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<td></td>
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<tr>
<td>Wholesale trade</td>
<td>62,553</td>
<td></td>
<td></td>
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<tr>
<td>Construction</td>
<td>58,311</td>
<td></td>
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<tr>
<td>Educational services</td>
<td>57,860</td>
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</tbody>
</table>

Source: CT DOL
Unemployment Rate: CT and U.S.

Source: US BLS
Energy Industry Outlook

• Residential/small businesses: more energy choices, can choose less expensive or express environmental preferences
• Large commercial (corporate/university): sustainability, resiliency, grid independence
• Installers: growing market to install solar and microgrids
• Power generation: new opportunities using different technologies to put power on the grid, changing fuel mix
  ◦ Generation in U.S. from non-hydro renewable (largely wind and solar) has nearly doubled from 5% in 2012 to almost 10% in 2017
• Utilities: how to incorporate changing fuel mix and keep stability, may need energy storage to manage increased renewables
Emerging Technologies and Stakeholders

<table>
<thead>
<tr>
<th>Emerging Technologies</th>
<th>Residential</th>
<th>Corporate, University</th>
<th>Power Generation</th>
<th>Utility Distribution</th>
<th>Installers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Rooftop Solar</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Energy Storage</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Micro Grids</td>
<td>X</td>
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<tr>
<td>Offshore Wind</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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</table>
Key Findings

• Connecticut’s economy remains sluggish despite growth at the national level

• Industry trends affect business competitiveness, space needs, worker demands

• Growing energy-related industry in Connecticut: installers (solar, micro grids)

• Potential energy industries for Connecticut: energy storage to manage increased renewables, power generation via renewables
Thank You

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