Ranking US Cities’ Oil Addiction: Sprawl and Car Commuting Emerge as Real Estate Risk Factors

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Warren Karlenzig, President, Common Current
www.commoncurrent.com
2006-2008: Oil Prices Rise 272% observed behavioral changes:

- Mobility
- Employment Activity
- Real Estate Activity (impacting market value)
2006-2008: Change in Behaviors U.S. Mobility

Record public transit ridership increases nationally:

Up 5.2 % Q2 2008 (light rail up 12.3 %)

Vehicle miles traveled:

Down 3.3 % Q2 2008
2006-2008: Change in Behaviors Employment-Related Activity

- More Telecommuting
  
  **2007**: 8 largest US cities more than 5%
  
  **2005**: 3 largest US cities more than 5%

- People now factor commute costs into job choices, particularly low-income workers

- Impact on mobility to look for employment
2006-2008: Change in Behaviors Real Estate Market Activity

Far out, off-transit properties drop in sales value. Direct impact of Gas costs.
Older Cities: Our best models

- Dense, walkable center with cultural attractions, jobs, parks, farmers markets, and residential neighborhoods easily accessible by foot, bike, and public transit.
Worst model: Exurban Sprawl

- Lower density, poor or undefined centers
- Separate business, commercial and residential districts (access by car only).
- Unconnected streets, cul-de-sacs
Gas Supply Constraints
Running Out of Gas and CO2 Out of Control?

“By 2015, growth in the production of easily accessible oil and gas will not match the projected rate of demand growth" and that, "remaining within desirable levels of CO2 concentration in the atmosphere will become increasingly difficult."

Shell CEO  Jareon van der Veer
Oil Supplies will Tighten and Prices Jump: International Energy Agency—11/7/08

“The recent slump in oil prices won’t last long and current global trends in ‘energy supply and consumption are unsustainable.’”

2008 World Energy Outlook quoted in 11/7/08 WSJ
Oil Supplies: We are Vulnerable!

1970: US imports one third of its oil
2008: US imports almost two thirds oil

US extremely vulnerable to supply disruptions from Middle East, Nigeria, Russia, US Gulf Coast, etc.
Top Post-Oil City Preparedness

1. San Francisco
2. New York City
3. Washington, DC
4. Seattle
5. Oakland
6. Chicago
7. Portland, OR
8. Philadelphia
9. Baltimore
10. Boston
Ranking California City Post-Oil Preparedness (against top 50 US cities)

1. San Francisco
5. Oakland
13. Los Angeles
15. Long Beach
16. San Diego
22. Sacramento
30. San Jose
38. Fresno
Most Oil-Addicted Major US Cities

41. Louisville, KY
42. Omaha, NE
43. El Paso, TX
44. Nashville, TN
45. Fort Worth (tie)
45. Memphis (tie)
47. Tulsa, OK
48. Indianapolis
49. Jacksonville, FL
50. Oklahoma City
City Post-Oil Preparedness Metrics

Transit Data from US Census Bureau/2007 American Community Survey

- City Resident Commuter Public Transit Ridership %
- City Resident Walking/ Biking to Work %
- City Resident Carpooling to Work %
- City Resident Telecommuting Rate %
- Metro Area overall Public Transit Use

Also: **Metro Sprawl Ranking**, from Smart Growth America/ Rutgers 2002 study
City Post-Oil Preparedness other metrics that could be used:

- Farmers markets, community gardens
- Schools and restaurants using local food
- Preservation of local farmland
- Manufacturing: local sourcing
- Solid waste diversion: recycling, composting
- Automotive fuel efficiency per capita
- Alternative fueled vehicles per capita
City Post-Oil Preparedness Metrics
Transit Data from US Census Bureau/2007 American Community Survey

- City Resident Commute Transit Use: City %
- Metro Area Overall Transit Use %
<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Commute %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>New York City</td>
<td>54.6</td>
</tr>
<tr>
<td>2.</td>
<td>Washington, DC</td>
<td>36.4</td>
</tr>
<tr>
<td>3.</td>
<td>Boston</td>
<td>34</td>
</tr>
<tr>
<td>4.</td>
<td>San Francisco</td>
<td>33</td>
</tr>
<tr>
<td>5.</td>
<td>Chicago</td>
<td>26.7</td>
</tr>
<tr>
<td>6.</td>
<td>Philadelphia</td>
<td>25.3</td>
</tr>
<tr>
<td>7.</td>
<td>Baltimore</td>
<td>19.4</td>
</tr>
<tr>
<td>8.</td>
<td>Seattle</td>
<td>18.6</td>
</tr>
<tr>
<td>9.</td>
<td>Oakland</td>
<td>15.8</td>
</tr>
<tr>
<td>10.</td>
<td>Cleveland</td>
<td>13.6</td>
</tr>
<tr>
<td>14.</td>
<td>Los Angeles</td>
<td>11.3</td>
</tr>
<tr>
<td>20.</td>
<td>Long Beach</td>
<td>6.9</td>
</tr>
<tr>
<td>25.</td>
<td>San Diego</td>
<td>4.5</td>
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<tr>
<td>29.</td>
<td>San Jose</td>
<td>3.8</td>
</tr>
<tr>
<td>35.</td>
<td>Sacramento</td>
<td>2.8</td>
</tr>
<tr>
<td>38.</td>
<td>Fresno</td>
<td>2.4</td>
</tr>
<tr>
<td>50.</td>
<td>Arlington, TX</td>
<td>0.2</td>
</tr>
</tbody>
</table>
City Post-Oil Preparedness Metrics

- City Resident Commute by Walking-Biking %
- City Resident Commute by Carpooling %
<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Boston</td>
<td>14.3</td>
</tr>
<tr>
<td>2</td>
<td>Washington, DC</td>
<td>12.8</td>
</tr>
<tr>
<td>3</td>
<td>San Francisco</td>
<td>12.2</td>
</tr>
<tr>
<td>4</td>
<td>New York City</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Seattle</td>
<td>10.6</td>
</tr>
<tr>
<td>6</td>
<td>Minneapolis</td>
<td>10.2</td>
</tr>
<tr>
<td>7</td>
<td>Philadelphia</td>
<td>8.9</td>
</tr>
<tr>
<td>8</td>
<td>New Orleans</td>
<td>8.5</td>
</tr>
<tr>
<td>9</td>
<td>Portland, OR</td>
<td>8.3</td>
</tr>
<tr>
<td>10</td>
<td>Honolulu</td>
<td>7.9</td>
</tr>
<tr>
<td>11</td>
<td>Oakland</td>
<td>6.6</td>
</tr>
<tr>
<td>12</td>
<td>Sacramento</td>
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<td>13</td>
<td>Long Beach</td>
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<td>Fresno</td>
<td>2.7</td>
</tr>
<tr>
<td>17</td>
<td>San Jose</td>
<td>2.7</td>
</tr>
<tr>
<td>18</td>
<td>OK City</td>
<td>1.1</td>
</tr>
</tbody>
</table>
City Post-Oil Preparedness Metrics

- City Resident Work from Home
- Telecommuting %
City Resident Commute % by Telecommuting

1. Oakland 7.6
2. San Francisco 6.8
3. San Diego 6.6
4. Portland, OR 6.4
5. Atlanta 5.8
6. Virginia Beach 5.3
7. Denver 5.1
8. Washington, DC 5
9. Minneapolis 4.8
9. Nashville 4.8
9. Seattle 4.8
12. Los Angeles 4.7
24. Long Beach 3.6
26. Sacramento 3.5
28. Fresno 3.4
30. San Jose 3.3
50. Memphis 1.8
City Post-Oil Preparedness: Metro Sprawl Ranking
City Post-Oil Preparedness: Metro Sprawl Ranking*

1 = Least sprawled  83 = Most sprawled

1. New York City
4. San Francisco
24. Fresno
27. San Jose
37. Sacramento
38. San Diego
39. LA-Long Beach

43. Anaheim-Santa Ana
75. Oxnard-Ventura
70. Vallejo-Fairfield-Napa
83. Riverside-San Bern.

*Smart Growth America, 2002
The impact of gas costs on household budgets: year 2000
The impact of gas costs on household budgets: 2008
The impact of gas costs on household budgets: year 2008
The impact of gas costs on household budgets: year 2000
The impact of gas costs on household budgets: 2008
Beginning of Economic Crisis: Exurban Real Estate
Sprawl Now Highest Risk in Real Estate Value 2007-2008

Metros centers with strongest public transit, walkability, density have kept value. Further out more auto-dependent locations have dropped significantly in value.

### The effect of centrality on housing price changes

*Change in housing prices last 12 months*

<table>
<thead>
<tr>
<th>METRO AREA</th>
<th>REGION-WIDE AVERAGE</th>
<th>CLOSE-IN NEIGHBORHOODS</th>
<th>DISTANT NEIGHBORHOODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>-4%</td>
<td>0%</td>
<td>-4%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>-11%</td>
<td>-6%</td>
<td>-10%</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>0%</td>
<td>2%</td>
<td>-5%</td>
</tr>
<tr>
<td>Portland</td>
<td>-1%</td>
<td>3%</td>
<td>-5%</td>
</tr>
<tr>
<td>Tampa</td>
<td>-13%</td>
<td>-9%</td>
<td>-14%</td>
</tr>
</tbody>
</table>

Regression estimates based on zip code data; Close-in neighborhoods is the estimated
Top Post-Oil Cities match top-performing Urban Core Real Estate 2007-2008

<table>
<thead>
<tr>
<th>Top Post-Oil Cities</th>
<th>Urban (10 miles center vs. 50 miles Real Estate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.,5. SF/Oakland</td>
<td>San Francisco +6.2</td>
</tr>
<tr>
<td>2. New York City</td>
<td>New York +11.8</td>
</tr>
<tr>
<td>3. Washington, DC</td>
<td>Washington DC -0.4</td>
</tr>
<tr>
<td>4. Seattle</td>
<td>Seattle +2.4* (20m)</td>
</tr>
<tr>
<td>6. Chicago</td>
<td>Chicago +3.7</td>
</tr>
<tr>
<td>7. Portland, OR</td>
<td>Portland N/A</td>
</tr>
<tr>
<td>8. Philadelphia</td>
<td>Philadelphia +5.2</td>
</tr>
<tr>
<td>9. Baltimore</td>
<td>Baltimore +7.3</td>
</tr>
<tr>
<td>13. Los Angeles</td>
<td>Los Angeles +14.2</td>
</tr>
</tbody>
</table>
Sprawl Now top Real Estate Risk

Metros with strongest public transit, walkability, density have kept value in city centers from 2006 to 2008. Further out more auto-dependent locations have dropped significantly in value.
Policy based on Vehicle Miles Traveled: strengths/ weaknesses

Can be **effective high-level indicator** for carbon reduction on state and regional levels

**Weaknesses:**

- **Poor local planning tool** -- Feedback provided is inaccurate at community level (pass-through traffic).
- Does not track **occupancy**: carpool, shuttles, transit
- **Does not track efficiency**: vehicle mileage, low-carbon fuel vehicles
- Poor social engineering tool: Provides blunt “stick” only. “**Drive less!**” vs. “**Consider Transit…**”
- “**VMT**” Sounds like a **disease**
Economics, Government Policy, Public-Private Collaboration, IT, Social Behavior, Planning, Academic Research
“Sustainable Communities”: Senate Bill 375 Takes on Sprawl

Directs development of housing closer to transit, more infill

**Carrots:** Billions of dollars for denser, transit-oriented suburban and urban development with mixed-use real estate.

**Stick:** Reduces federal transportation funding and imposes more stringent and lengthy environmental review processes for sprawl.
Senate Bill 375 Takes on Sprawl

Multi-Stakeholder Effort

Supporters include:

• California Building Industry Association
• Regional MPOs
• California Alliance for Jobs
International solution: LEED-ND

Planning/ Land Use

US Green Building Council/ NRDC/ Center for New Urbanism:

LEED for Neighborhood Development (LEED-ND) -- Takes LEED standards and applies to new developments or neighborhoods.
International solution: LEED-ND

Rewards infill, transit-oriented development

• Locations closer to existing town and city centers
• Areas with **good transit access**
• Green building
• Previously developed sites
• Sites adjacent to existing development
LEED-ND: 239 Pilot Projects in 5 nations
86% US (19% California); 14% non-US
45 projects in California from .5 to 1,400 acres
Information Technology
Walkscore.com
Downtown Sacramento: 95/100 “Walkers’ Paradise”
Drive-alone city commuter rates fell from 77% in 1995 down to 53% by 2007

- Traffic Demand Management Program run by Central Area General Improvement District
- Universal Transit Passes
- District-wide parking management, versus parking for each business
- No minimum parking requirements for businesses
Penn Institute for Urban Research


Chapter “What Makes a Green City?”
Common Current: Government, Business, NGO & Foundation collaboration

• Packard Foundation
• US Department of State
• European Union
• Mixed-Use Developers
• NGOs: Green Valley
• Asian Institute Energy, Environment & Sustainability
• State of California
• Local Government
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