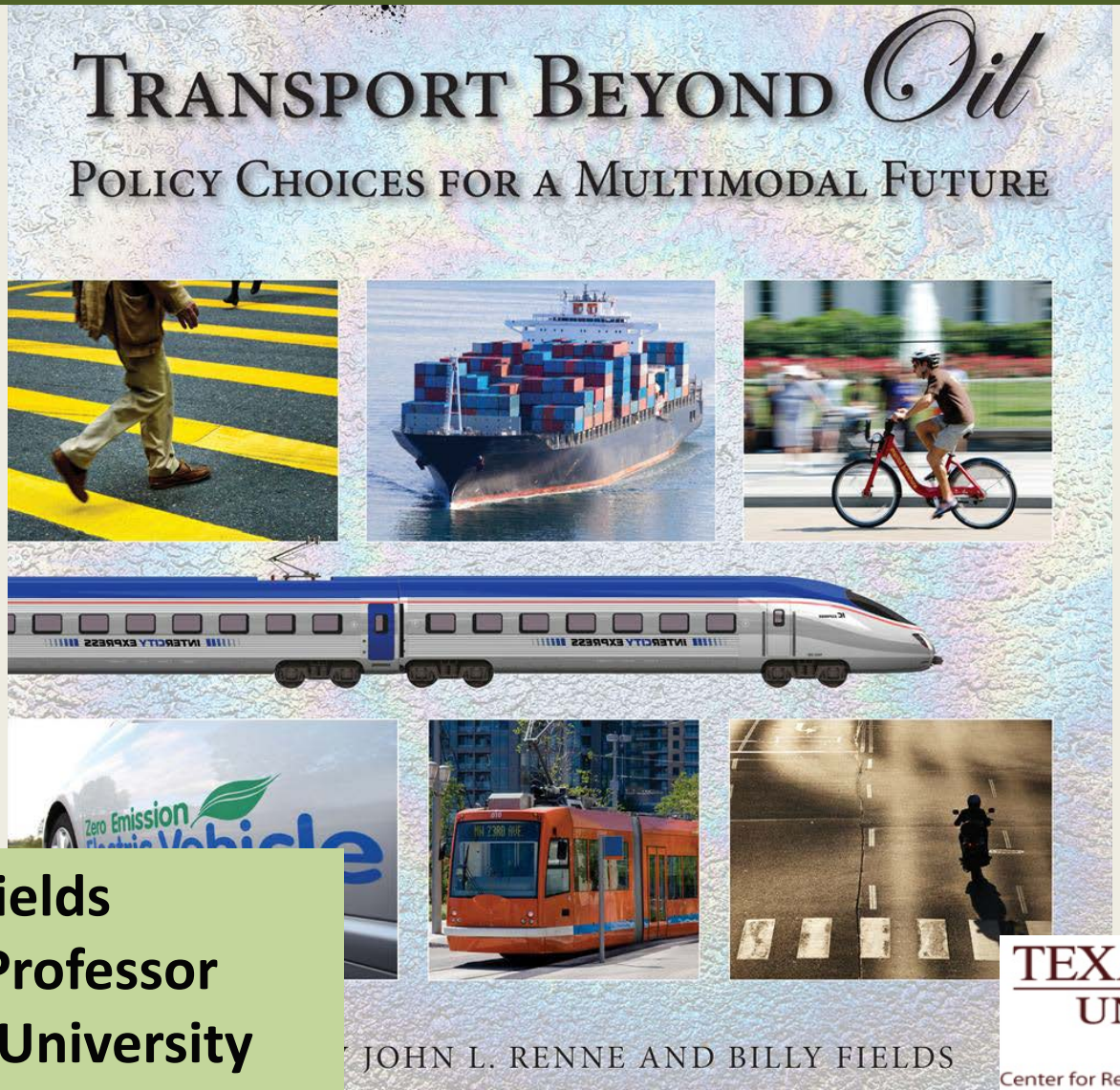
Imagining Transport Beyond Oil: Austin Emission Mitigation Options



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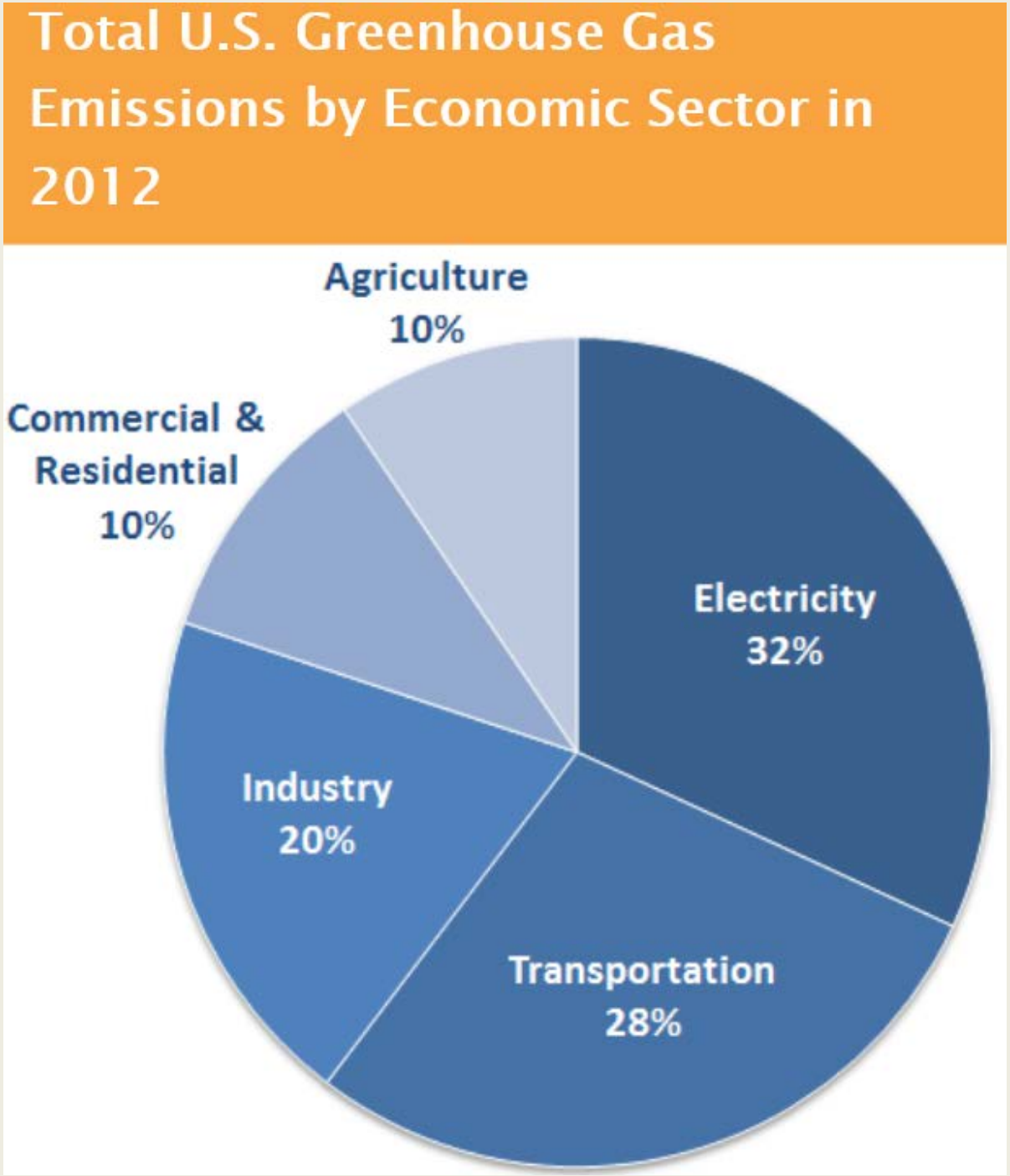
Scope of the Problem by Sector



U.S. EPA accessed June 2014

What Did We Find?

- Major reductions possible with multiple policies implemented across governmental levels
- Most optimistic findings from Lovaas (NRDC) and Potter (Cambridge Systematics) echo earlier Growing Cooler report: 35% reductions in transpo GHG possible by 2050 with an aggressive suite of policies and economy-wide pricing
- Gordon and Burwell (Carnegie) found that plug-in hybrids can decrease GHG 45% if power plants use limited coal; Need broad deployment
- We did not find policy option to get to zero GHG

What Did We Find?

- 2 options to get you zero emissions: technological silver bullet or major price shift that changes economic demand
- Even then it would be a monumental challenge
- But…we found optimism that establishing reasonable short term targets could shift the curve of GHG emissions from transpo sector
- At core, we found that leveraging quality of life improvements through walkable/transit centered approaches offers coalition-building opportunities to make major change

Three Key Themes of Book

1. National problem, national solutions
2. Current technology can significantly decrease transportation oil dependence
3. Paradigm shift necessary; requires focus on promise of solution

1. National Problem, National Solutions

- Over-dependence on oil for transportation weakens US ability to sustain a high quality of life in 21rst century:
  - Transportation largest short-term climate impact (Gordon and Burwell)
  - Oil vulnerability & financial risk (Sipe and Dodson)
  - Highway-centric approach drains resources that could enhance community choices (Newman)
- Clear federal role in infrastructure that:
  - decreases oil dependence
  - supports 21rst century economic development
  - improves community quality of life

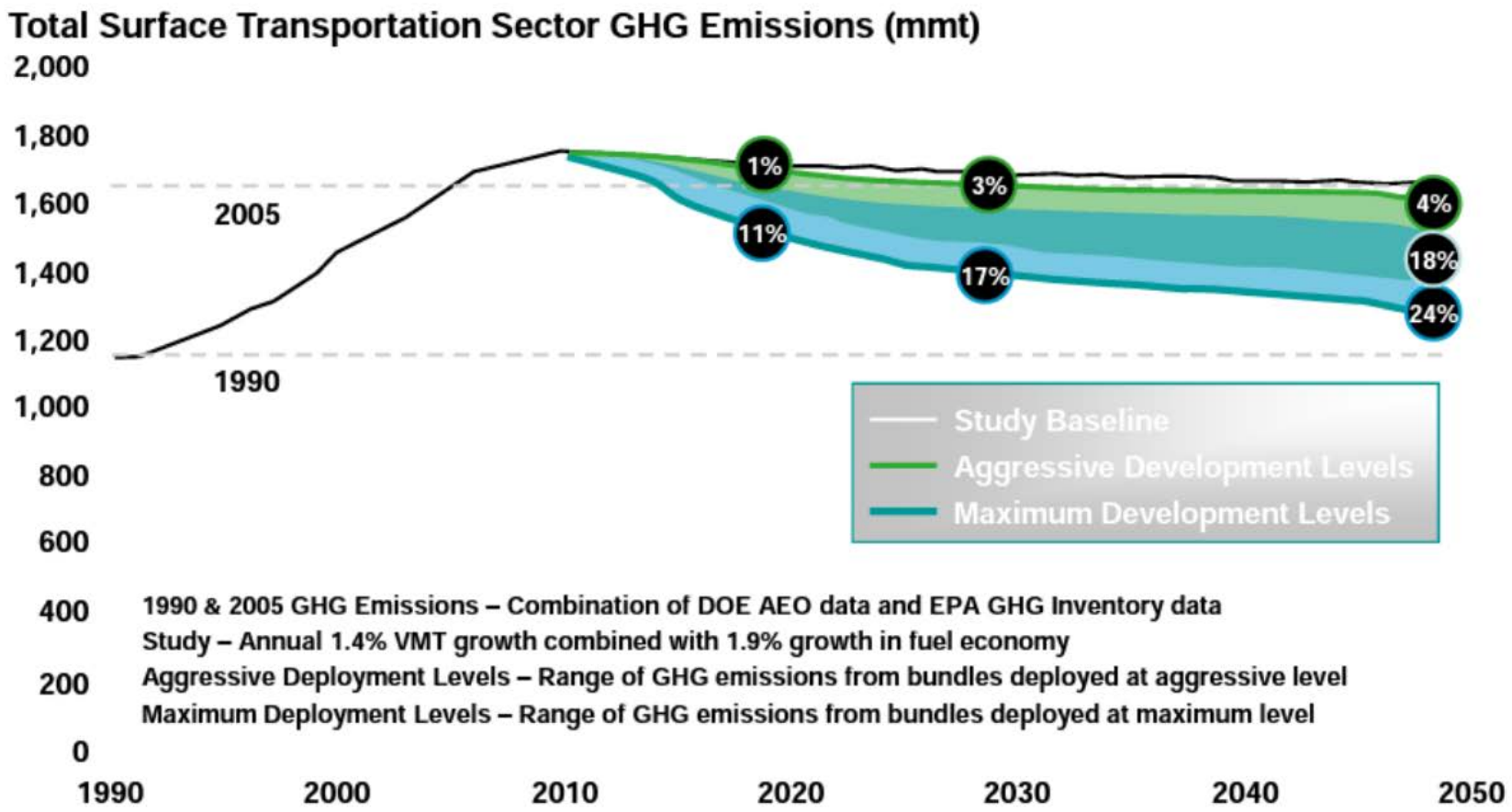
2. Solution Now: Current Technology Effective

- Technical capacity to significantly decrease transport oil consumption currently exists:
  - EVs (Gordon and Burwell)
  - Transit (Dutta, Lane)
  - Active transportation (Mills, Fields and Hull)
  - Land use change and TODs (Kenworthy, Renne)
- Multimodal transportation system can decrease oil use by:
  - Fostering density around station locations
  - Improving access to minimize distance traveled
  - Providing neighborhood choice for expanding demographic groups

2. Solution Now: Current Technology Effective

- Approach in Transport Beyond Oil matches other efforts
- Growing Cooler (2009) for example points to 4 types of policies that can decrease GHG:
  - Vehicle Technology
  - Fuel Technology
  - Travel Activity Management
  - Vehicle and System Operations
- More broadly, you could also decrease transpo GHG through significant changes in price of fuel/land use

2. Solution Now: Current Technology Effective



Source: Growing Cooler/NRDC

- Lovaas & Potter updated above findings: max 35% reductions possible with European-level pricing

3. Paradigm Shift: Improved Quality of Life

- Need to move beyond the silver bullet: need suite of options for change (EV, land use, transit, active transportation)
- Immediate challenge is political, not technical
- To move towards change, we need to move beyond pure fear-based motivations and towards opportunity (Newman)
- This looks like the places Americans want to live: stronger local economies and improved quality of life

Austin Approach? Quality of Life Foundation

- Framing: two-tier local/regional strategy
- Local approach: quality of life/walkability focus
- Regional approach: transit/rail/EV approaches

"Tackling really long commutes requires a regional strategy, looking at land-use and transportation integration. But at the neighborhood level, we're not talking about commute trips. We're talking about taking your kids to school in the morning, picking up your dry cleaning in the afternoon, going out for a spontaneous dinner because you didn't get to the grocery store that week, or even going to the farmers' market. I want people to have real and very different choices about how they make those trips" Seleta Reynolds General Manger City of Los Angeles Department of Transportation

Source: http://planningreport.com/2014/07/30/new-la-dot-gm-enthusiastically-accepts-management-challenge

Focus on Building Places for People: Land Use, Transportation, Quality of Life

Midtown Greenway
Minneapolis, MN

Questions?

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