Shale Public Finance

Local government revenues, costs, and net fiscal impacts associated with oil and gas development

Daniel Raimi, Associate in Research, Duke University Energy Initiative

Shale Public Finance Workshop

August 31, 2015 | Durham, NC

Note: the findings presented below are preliminary and are subject to revision

Presentation agenda

- Overview of project
- Key oil- and gas-related revenues and costs for local governments
- Findings from eight states
- Analysis and discussion questions

Shale Public Finance project

- Funded by:
  - The Alfred P. Sloan Foundation
  - The Duke University Energy Initiative
- Carried out by the Duke University Energy Initiative
  - Richard Newell, director and principal investigator
  - Daniel Raimi, key researcher and analyst

Key questions

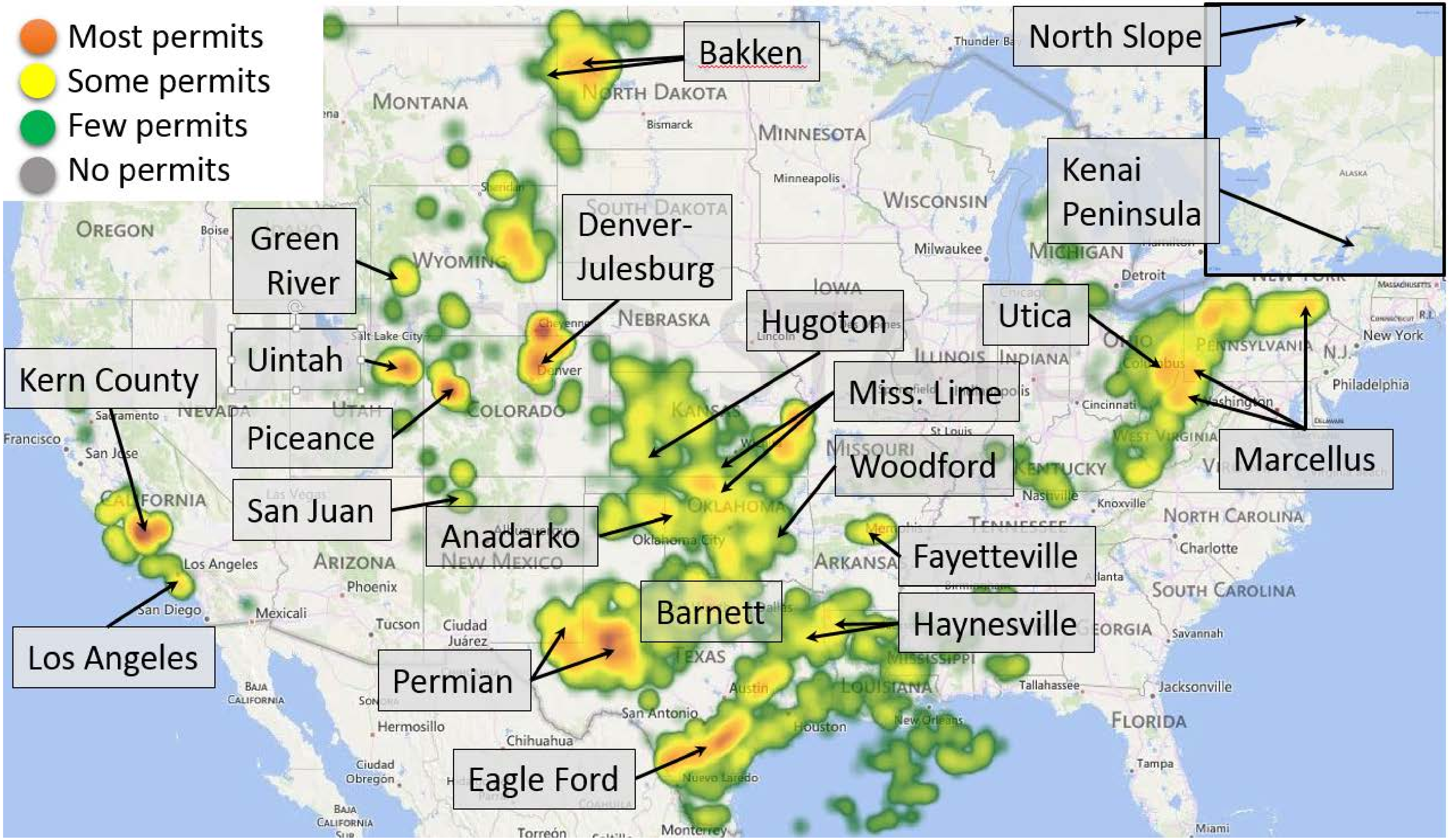
- What are the fiscal impacts to local governments from new or increased oil and gas development, and how have these impacts varied from region to region?
- Have varying state and local policies affected the net fiscal impact?
- What lessons can be learned?

Research methods

- Regions were selected to complement previous research
  - Some regions have seen large scale growth in recent years
  - Other regions are longtime producers and production is in decline
- Structured interviews with local public officials in eight states
- Interviews with experts from state government, industry, independent researchers
- Analysis of state and local financial documents
- Analysis of state oil- and gas-related tax policies

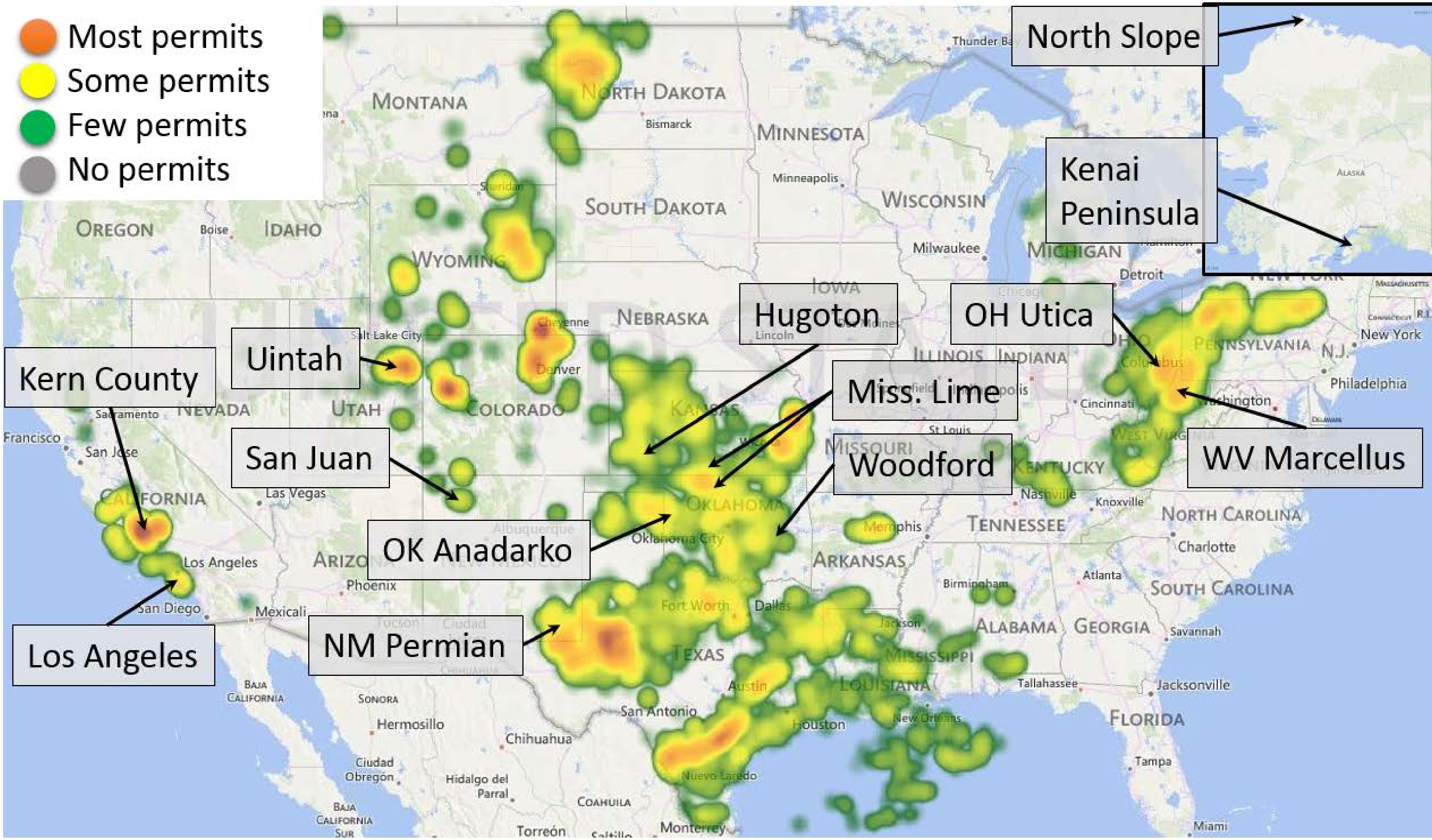
Travel and interviews

Our travels: heat map of recent drilling permits



Map source: Drilling Info 2.0. Heat map data represents drilling permits issued in the 90 days leading up to Feb. 20, 2015. Permit data not available for Alaska.

Today's presentation: phase II regions



Map source: Drilling Info 2.0. Heat map data represents drilling permits issued in the 90 days leading up to Feb. 20, 2015. Permit data not available for Alaska.

Key revenue sources and key costs for local governments related to oil and gas development

Key revenue sources for local governments

- State severance taxes
  - Collected by state governments, may or may not be allocated to local level
- State or federal leasing revenue
  - Collected by state governments, may or may not be allocated to local level
- Local ad-valorem property taxes
  - Collected by local governments, oil and gas property definitions vary by state
- Sales and use taxes
  - Collected by municipal governments in most states, counties in some states
- Direct payments
  - Leasing/royalty revenues for production on local government land
  - Fee-for-service activities
- In-kind contributions
  - Road repairs and/or donations fromcoil and gas companies

Key costs (i.e., service demands) for local governments in phase II states

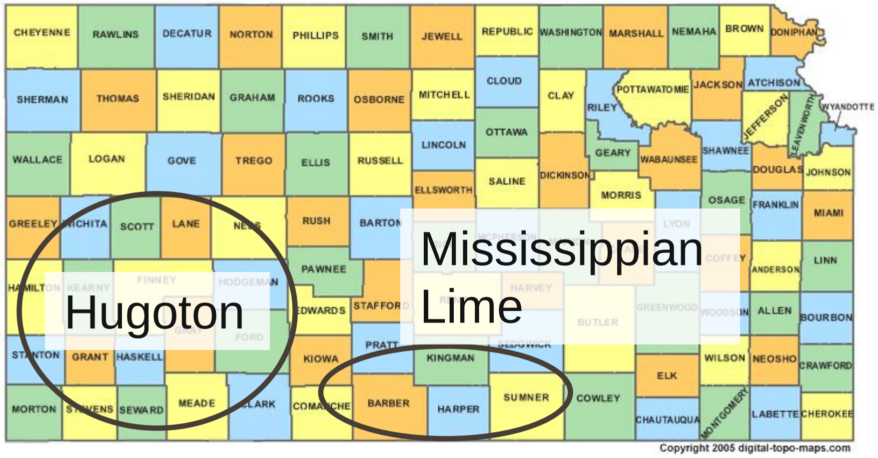
- Roads and bridges
  - May be impacted by heavy truck traffic
- Police/fire/EMS
  - Increased vehicle traffic, well site accidents, population can increase demand
  - Specialized training and equipment may be necessary
- Other staff costs
  - Workforce retention is often a challenge for local governments
  - Staff time and resources devoted to oil and gas issues can be substantial
- Sewer and water infrastructure
  - May require upgrades if municipalities experience population growth
- Environment-related costs
  - Legacy environmental issues (CA)
  - Earthquake-related property damage (KS, OK)

State-by-state findings

Kansas
Oklahoma
Ohio
West Virginia
New Mexico
Utah
California
Alaska

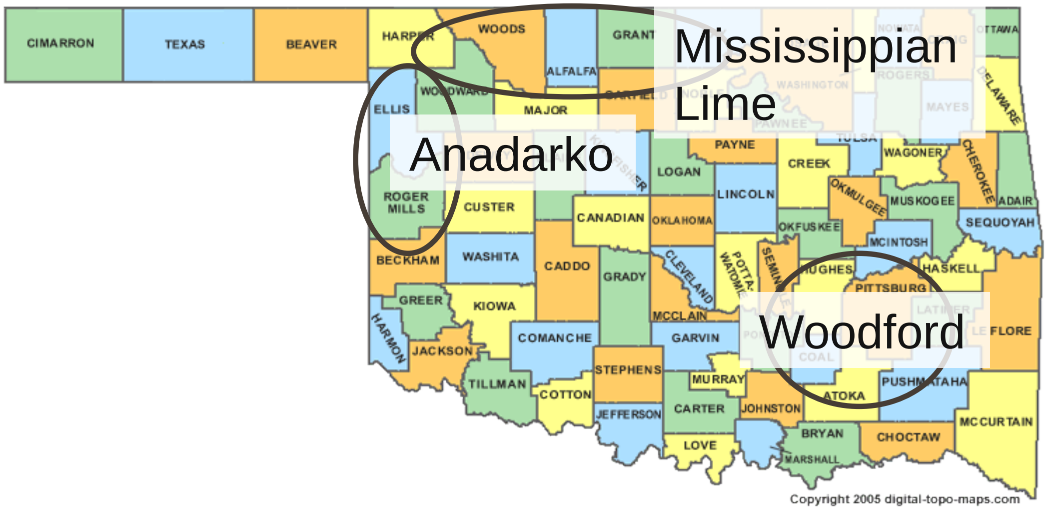
Kansas

- Net financial impact
  - Large net positive in longtime producing regions
  - Some counties in MS Lime region have not been able to keep up with road repair
- Key factors
  - Revenue volatility and state “sweeps” of severance tax revenue
  - Property tax valuation process leading to volatility and legal risk
  - Earthquake-related property damage



Oklahoma

- Net financial impact
  - Mostly net positive
  - Counties in MS Lime and Anadarko region with less robust infrastructure have not been able to keep up with road repair
- Key factors
  - Limited pipeline infrastructure in MS Lime and Anadarko regions adds to heavy vehicle traffic
  - Limited flexibility to shift funds to cover road costs

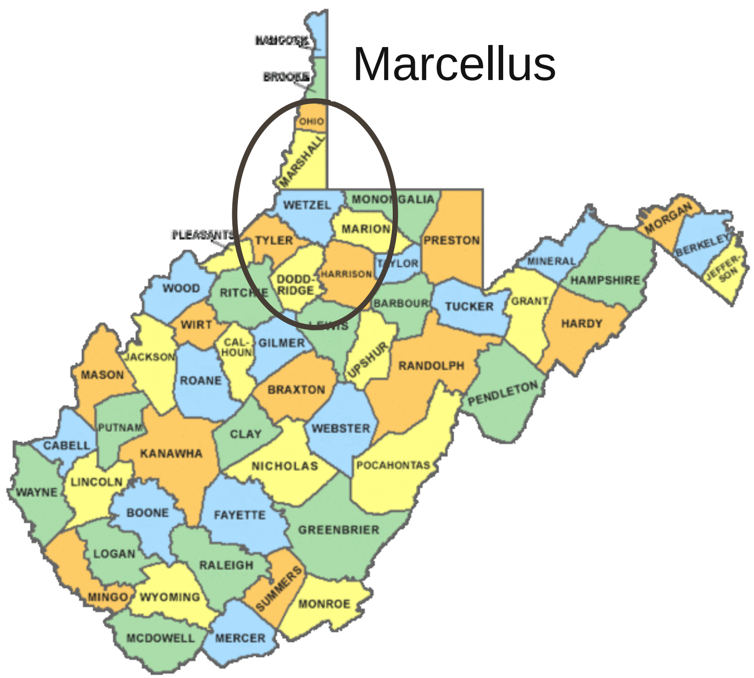


Ohio

- Net financial impact
  - Consistently net positive for counties and munis
- Key factors
  - Road Use Maintenance Agreements (RUMAs) are widespread
  - Property, sales and local income taxes have increased

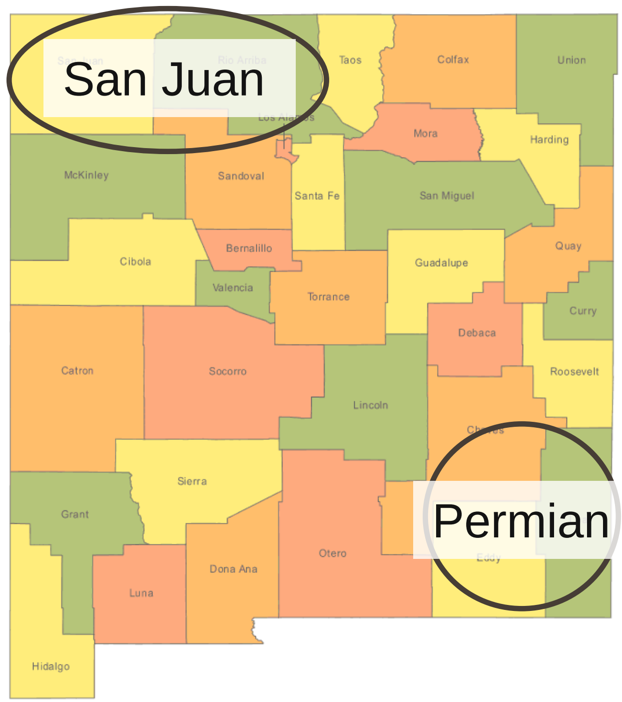
West Virginia

- Net financial impact
  - Consistently net positive for counties and munis
- Key factors
  - Damage to rural state-maintained roads
  - Limited private employment growth for local residents



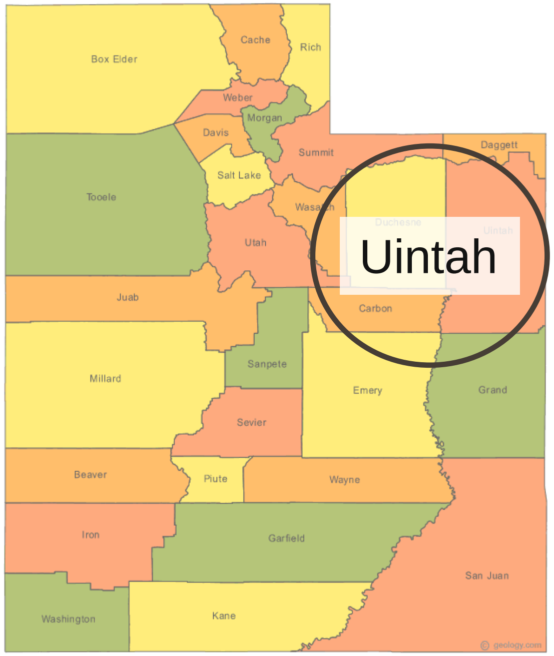
New Mexico

- Net financial impact
  - Mostly net positive, some challenges managing growth in Permian region
- Key factors
  - Managing revenue volatility during “boom-bust”
  - Economic diversification for long-term fiscal health



Utah

- Net financial impact
  - Mostly large net positive, excepting one county
- Key factors
  - Skilled local workforce has limited population growth
  - Waxy crude contributes to heavier vehicle traffic

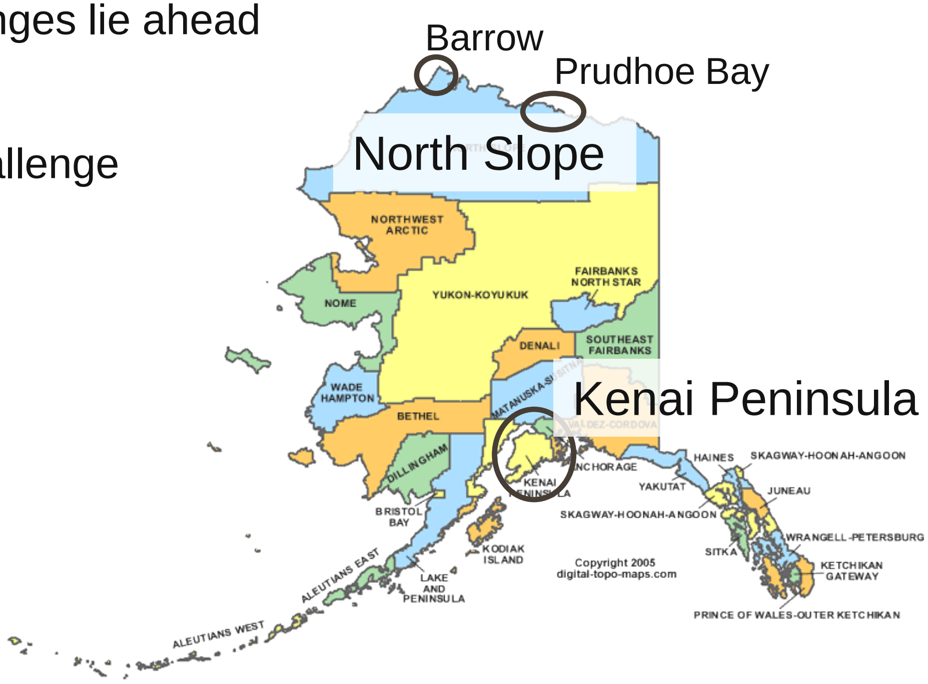


California

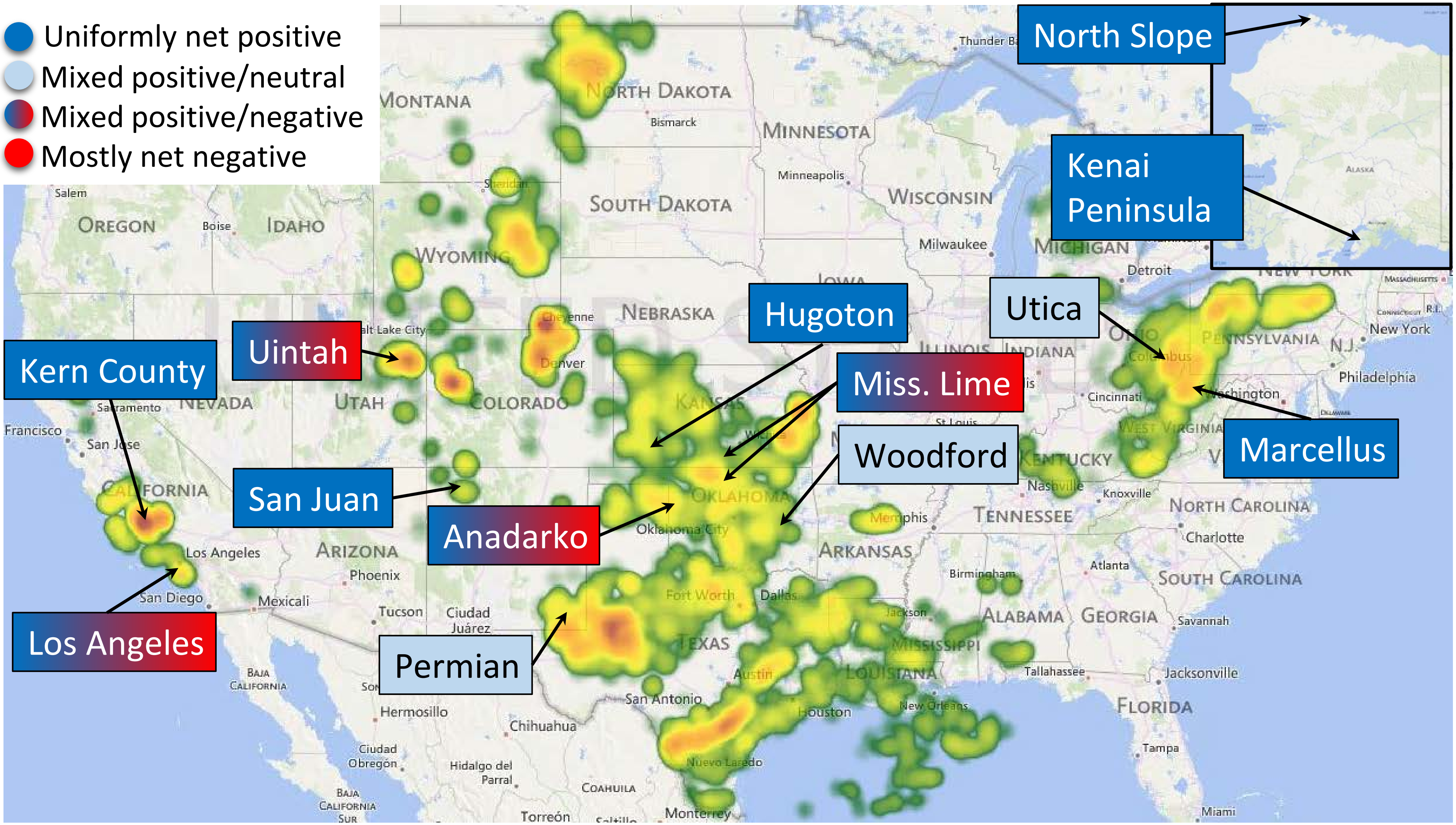
- Net financial impact
  - Little fiscal impact for LA city and county
  - Mixed impacts for some smaller LA munis
  - Mostly large positive impacts in Kern County region
- Key factors
  - LA region has a variety of unusual issues
  - Oil and gas is a key part of Kern Co. economy

Alaska

- Net financial impact
  - Large net positive
- Key factors
  - Most state and local revenue depends on oil/gas
  - Revenues are falling and challenges lie ahead
  - No state sales or income tax
  - Economic diversification is a challenge



Summary of local government net fiscal effects



Map source: Drilling Info 2.0. Heat map data represents drilling permits issued in the 90 days leading up to Feb. 20, 2015. Permit data not available for Alaska.

Analysis and conclusions

- Most local governments report net positive fiscal impacts
- But local factors and policies matter
  - In rural regions with heavy activity, infrastructure costs can outpace revenues
- Regions with declining production face different issues
  - Economic diversification will be a challenge for some regions
- Revenue volatility can be a major challenge
  - Policies in some regions exacerbate, rather than smooth out this volatility
- Environmental issues can create substantial costs
  - Legacy pollution in LA region, earthquakes in Mississippian Lime region
- Collaboration with industry can help reduce costs
  - Why does collaboration occur in some states/regions and not others?
- Alaska faces a distinct set of challenges
  - Little revenue diversification offers lessons for other states

Questions and feedback

- Are we accurately describing the experience in your region of expertise?
- Have we left out any important issues for local governments?
- Are there key findings or lessons that you have gained from your experience that we have not discussed?

For more information

Daniel Raimi

Associate in Research

Duke University Energy Initiative

energy.duke.edu

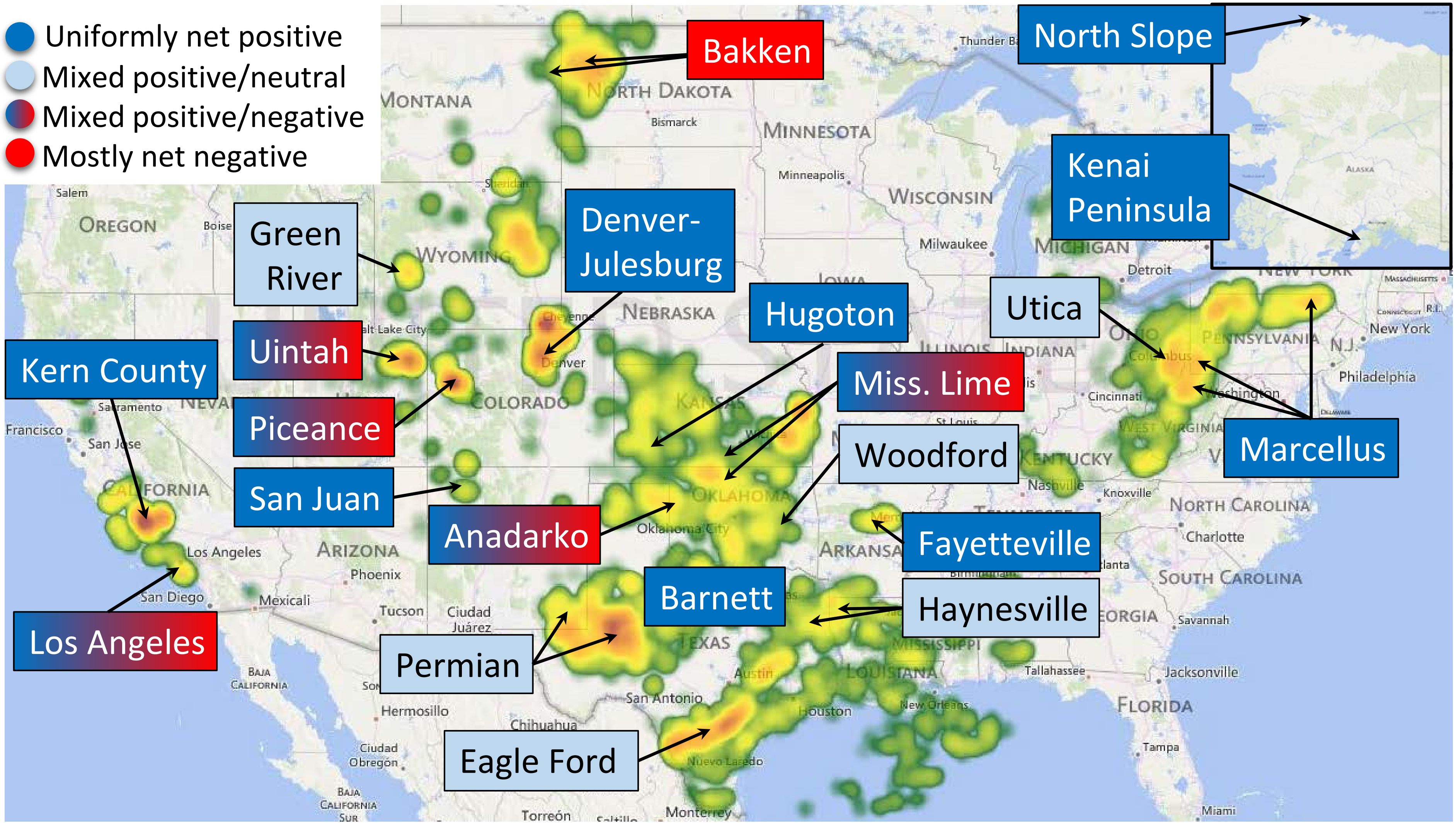
energy.duke.edu/shalepublicfinance/

daniel.raimi@duke.edu

919-886-1952

Note: the findings presented above are preliminary and are subject to revision

Summary of local government fiscal effects



Map source: Drilling Info 2.0. Heat map data represents drilling permits issued in the 90 days leading up to Feb. 20, 2015. Permit data not available for Alaska.