Utility-Scale Solar Projects in the Rural Midwest:
An Assessment of Knowledge Flows

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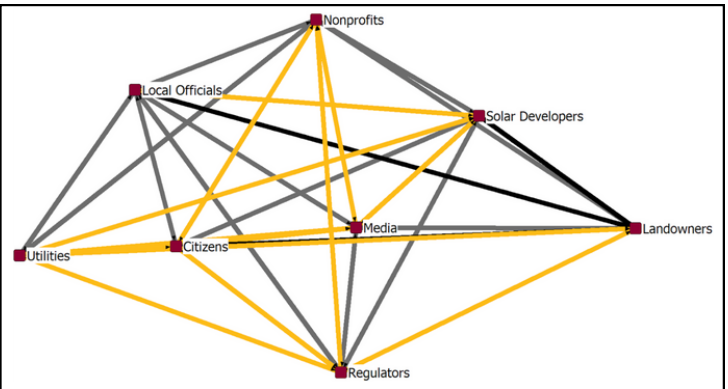
As utility-scale solar projects expand across the Great Lakes states, our team conducted stakeholder interviews with local government officials, landowners, solar developers, and others across this region to better discern how knowledge of project development flows across rural communities.

Knowledge Flows and Social Networks

- Solar project build-out is strongly determined by stakeholder engagement, public perception, and trust in developers
- Interpersonal stories and local informal information streams are often most convincing for decision-making in rural areas
- Social networks both convey information itself and signify the trust a recipient has in its source

Social Network Analysis Diagram



- Local officials most often engage in direct methods of communication across stakeholders
- Media and citizen stakeholders are central to communication flows with the highest number of social network connections

Results and Discussion

1. Local government officials appear to be the conduit of information, and are, along with landowners and nonprofits, among the earliest to receive solar project information
2. Solar developers lead in knowledge sourcing (i.e., prior knowledge flows, landowner outreach, pre-project feasibility), while media and nonprofit stakeholders lead in knowledge exchange (i.e., direct, indirect, within-group communication)
3. Future wishes centered around knowledge dissemination across stakeholder groups, identifying development misunderstandings of long-term benefits (nonprofits), failure to share information within the project's community (local officials), and conflict management during development conversations (utilities), as areas for improvement

Study Area

Methods

1. 45 semi-structured interviews conducted via purposive sampling
2. Interviews coded by 10 knowledge flows developed from pilot observations
3. Results assessed by determining knowledge flow patterns, and by using Social Network Analysis

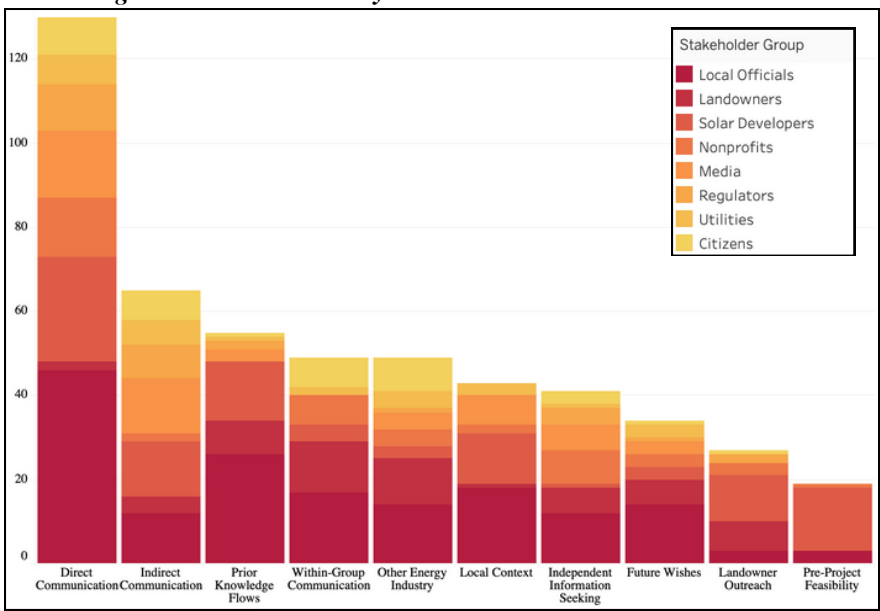
Local Official Interview

"While solar has a lot of benefits, that's a decision that each community needs to make for themselves, and there's a lot of diverse points of view on the value of solar among tribal and other communities. So sharing information with people, getting buy-in, and understanding what the community wants is really important."

Interviewees by State

State	Stakeholder Group: Local Officials	Landowners	Solar Developers	Nonprofits	Media	Regulators	Utilities	Citizens	Grand Total
Illinois	2	1	1		1	1			6
Indiana	4	1		1		1	1	1	9
Michigan	1	2	1	1		1			6
Minnesota	2	1	1		1			1	6
Ohio	2	3	1	1	1			1	9
Wisconsin	4	2	1				2		9
Grand Total	**15**	**10**	**5**	**3**	**3**	**3**	**3**	**3**	**45**

Knowledge Flow Code Results by Stakeholder



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