

STIR Cities: Engaging Expert Performances of Sociotechnical Imaginaries for the Smart Grid

Project Summary

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In order to analyze the shaping of emerging sociotechnical smart energy systems and to explore the potential for social science engagements with alternative forms of imagination and design, the three-year comparative STIR Cities project will explore the relationship between (1) sociotechnical imaginaries, collectively imagined forms of social life that are “almost always imbued with implicit understandings of what is good or desirable in the social world writ large” (Jasanoff and Kim 2009:122-123); (2) technological system design, understood as situated performance of these imaginaries; and (3) intervention-oriented socio-technical integration research (STIR), collaboratively engaging with a distributed network of technical experts constructing smart energy systems in Phoenix, AZ and Portland, OR.

The project will comparatively investigate how “smart” energy systems are being developed and deployed in urban centers, how they are being imagined to meet and create desirable forms of social and technological order, and to what extent engagements with diverse technical experts across these systems foster reflexive learning and deliberation over broader emerging alternative forms of social and technological order, ultimately for the sake of socially responsive expert practices and technological design choices.

Intellectual Merit of the Proposed Work

The STIR Cities project combines theoretical work on sociotechnical imaginaries with empirical work on social science engagements. It does this by investigating the active performance of sociotechnical imaginaries in everyday technical expertise and the results of social science engagement therewith. The project will also provide theoretical insights into how the local can generate distinct sociotechnical imaginaries and how they articulate with national discourses. Additionally, the project adapts a demonstrably effective form of collaborative social science engagement with the laboratory to a broad diversity of actor sites, and monitors the effects of this collaborative engagement on expert decisions and technological system design over significantly longer periods of time. Finally, the project will compare two urban-based interactions with national sociotechnical imaginaries and will compare the interactions of engaged social science with routine technical expertise across multiple organizational settings and between two cities.

Broader Impacts of the Proposed Work

In an effort to promote the responsible innovation of “smart” cities and energy systems, the STIR Cities project will refine, adapt and extend collaborative engagement methods that have been effective in simultaneously advancing scientific creativity and social responsibility in the laboratory, to a broader diversity of technical decision-making and expert decision practices. It will provide practical insights, reflexive learning opportunities, and capacity building enhancements to decision-making processes and expert performances, both to individual organizations involved in the urban design and deployment of smart grids and to the collective set of organizations involved (laboratories, utilities, regulators, industry associations, civil society, etc.). Finally, the project will assess the effectiveness of the design and deployment of smart grid technologies in terms of whether they are currently advancing the social and public goals that have been invoked to justify them in both national and urban contexts.