

STIR Cities: A Socially Reflexive Method for Engaging Energy Systems Design and Planning



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ASU SCHOOL FOR THE **FUTURE**
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Outline

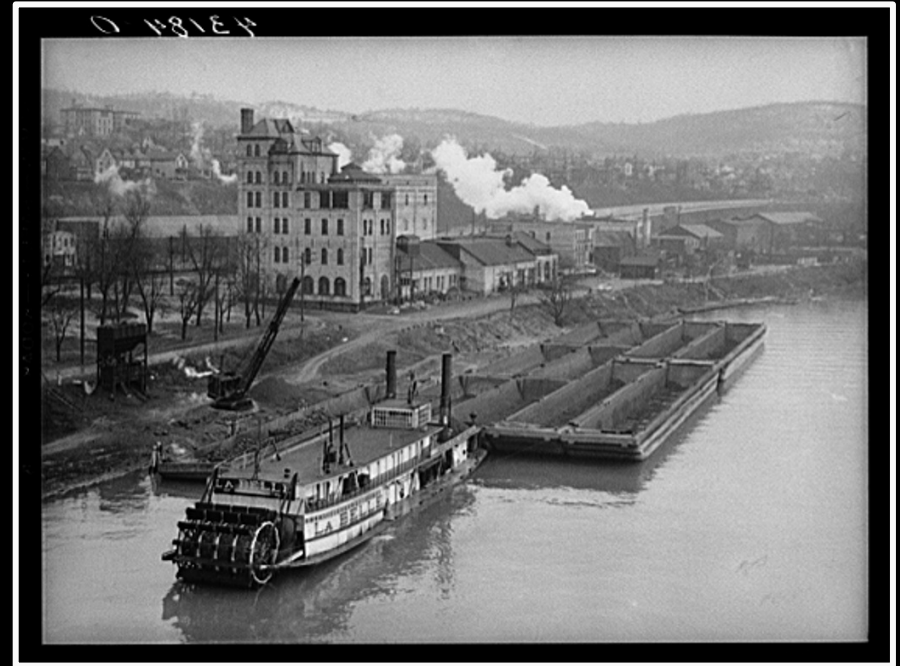
- Energy and American society
- Energy systems have social, moral and material dimensions
- Salt River Project M-Power® Case
- Engaging in energy systems design and planning

There are social, moral, and material aspects to how we think about energy systems – engaging with these aspects has the potential to transform how we go about design and planning

Energy as a Social Activity

Case: Coal and Oil in 19th Century Pennsylvania

- Build networks of people, knowledge, capital, and resources
- “co-produce” material landscapes and societies



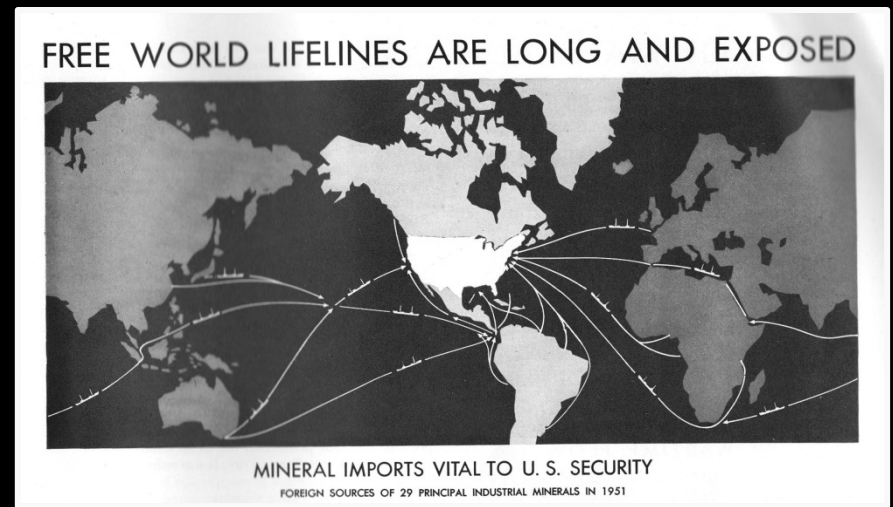
Source: Jones, 2014

Image Source: Library of Congress, 2015

Energy as a Moral Activity

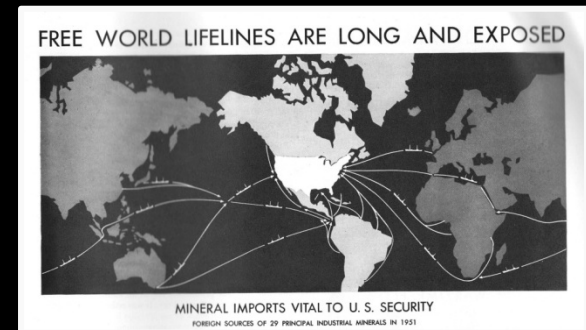
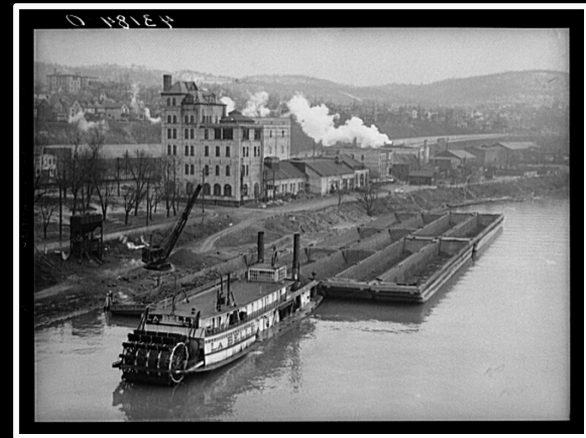
Case: Energy Security in the United States

- Economies, resources, and moral actors
- Securitization as normalizing material flows and behavioral patterns



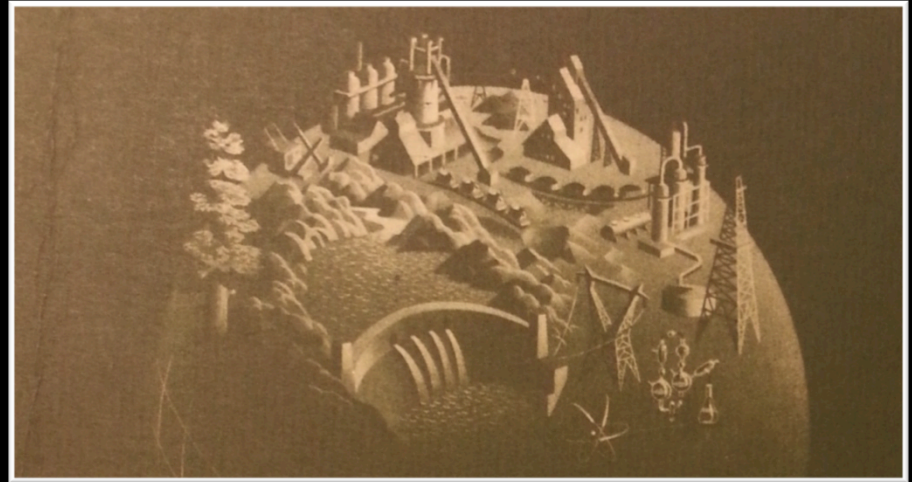
Energy as a Material Activity

In both cases, the materiality of energy resources and systems matters greatly



Sociotechnical Imaginaries

- Material, social, and moral activities
- Invoke futures of what a “good society” includes
- Profoundly real through daily performance
- **Outcomes ≠ Agency**



Salt River Project's M-Power®

M-Power® Energy Management System

- User Display Terminal
- M-Power® Meter
- Smart Card



SRP's M-Power®

M-Power® was designed to meet particular demands

- Arizona Legislature
- Arrears
- Low-Income family cost management



M-Power® Social, Moral and Material Effects

Three salient claims:

- System disproportionately effects low-income families and minorities
- M-Power® is a questionable demand-side management tool
- Does SRP have a moral obligation to its customers?

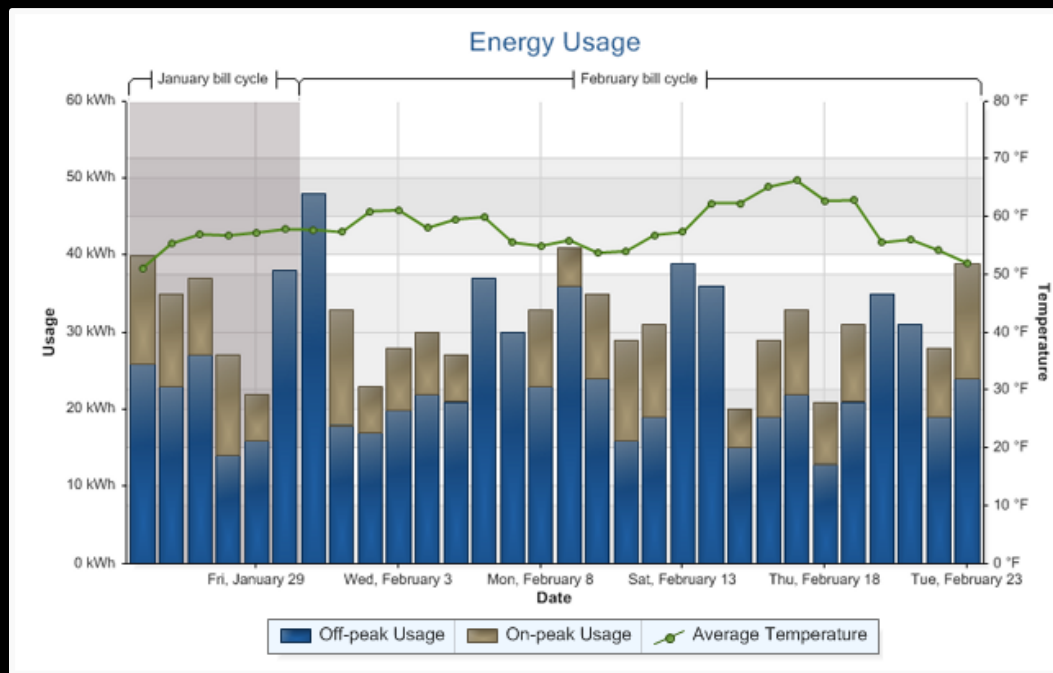
Low-income/Minority Families

- Question of monetary options
 - Significantly lower initial deposit
 - Cost of system installation spread over 1st year bill payments
- Consideration of history of system applies



Demand-side Response Tool

- Arizona Consumer Action Association claim
- System Design vis-à-vis “smart meters”



Source: Howat and McLaughlin, 2012; SRP, 2015

Credit and Power

- Ostensible purpose was to lower arrears
- Programs exist for at risk populations
 - Families with small children, elderly
 - Program visibility unclear
- Question of functional design versus social responsibility

“There is a belief that the utility is the last bastion of easy credit for low income customers and that we should do everything we can to keep the power on” – SRP Manager

Examining to Engaging: STIR Cities

Sociotechnical imaginaries are expressed through everyday activity in design and planning

- Not a question of agency – a question of outcomes
- Socio-technical Integrated Research (STIR)
 - “close proximity” and engagement
 - “practical transformation”

STIR Cities Plan

Theoretically address:

- Performances of sociotechnical imaginaries
- Recognition of expertise sites within larger technological and political enterprise
- Accounting for effects of engagement

Three-year plan

