Utilities 101
Presentation Overview

Where are we now?

How did we get here?

Where can we go & how will we get there?
Where are we now?

• What is an Electric Utility?
• Types of Electric Utilities
• The Current System: Injustice and Insecurity
What is an electric utility?

**Electric utility:** a company that generates and distributes electricity.
## Types of Electric Utilities

<table>
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<tr>
<th>Type of Utility</th>
<th>Definition from EIA</th>
<th>Financial/Management model</th>
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</table>
| Investor-Owned Utility (IOU)          | Large electric distributor that issues stock owned by shareholders.                  | Private company owned by stakeholders and managed by a board-appointed team of private sector employees.  
  **GOAL:** Optimize return on investment for stakeholders. |
| Co-operatively-Owned Utility (Co-ops) | Not-for-profit, member-owned utilities that are most common in rural areas.         | Member-owned and managed, not-for-profit.  
  **GOAL:** Optimize benefits for local customers. |
| Publicly-Owned Utility (POU)          | Federal-, state-, or municipal-run utility.                                        | Owned by local gov’t and/or customers of the utility. Managed by local officials or employees.  
  **GOAL:** Optimize benefits for local customers. |
U.S. electric utilities by ownership type (2017)

- **Number of companies**
  - Investor owned: 168
  - Cooperatives: 812
  - Publicly owned: 1,958

- **Million customers**
  - Investor owned: 110
  - Cooperatives: 20
  - Publicly owned: 24
The Current System: Injustice

https://www.naacp.org/climate-justice-resources/just-energy/
https://grist.org/climate-energy/one-big-march-lots-of-little-messages/
https://www.zinnedproject.org/materials/teaching-blockadia-movement-against-fossil-fuels
The Current System: Injustice

**Energy Injustice:** a lack of equity in both social and economic participation in the energy system that reinforces the social, economic, and health burdens produced by the energy system.

https://www.clf.org/blog/fracked-gas-dead-end-new-england
https://iejusa.org/section-1-defining-energy-justice/
POLLUTION EXPOSURE BY POPULATION (2003–2015)

- Latinx Americans: +63% exposure
- Black Americans: +56% exposure
- Non-Hispanic White Americans: -17% exposure

Source: Christopher W. Tessum et al., “Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure,” Proceedings of the National Academy of Sciences (March 2019).
The Current System: Burden and Insecurity

**Energy Burden:** Percentage of household income that goes toward energy costs.

The lower your income, the more you spend on energy.

**Energy Insecurity:** Lacking reliable access to uninterrupted energy sources at an affordable price.

https://www.iea.org/topics/energy-security
Avg. Energy Burden (% Income) for the United States

The United States

- Electricity
- Gas
- Other

AMI

0% - 30%
30% - 60%
60% - 80%
80% - 100%
100%+
Households experiencing household energy insecure situations, 2015

- **Report any household energy insecurity**: 30%
- **Reduce or forgo basic necessities to pay energy bill**: 20% (Mostly in months)
- **Receive disconnect notice**: 15% (Mostly in months)
- **Keep home at unhealthy or unsafe temperature**: 10% (Mostly in months)

Source: U.S. Energy Information Administration, Residential Energy Consumption Survey 2015
Shares of Households by Race Experiencing Energy Insecurity, 2015

- Hispanic or Latino: 45.0%
- White Non-Hispanic or Latino: 25.4%
- Black or African American: 52.2%
- Asian: 20.4%
- American Indian or Alaska Native: 61.5%
- Native Hawaiian or other Pacific Islander: 50.0%
Summary

- IOUs currently dominate the energy landscape in the US
- Low income and communities of color bear disproportionate negative impacts from our current energy system
  - Environmental and health impacts
  - Energy burdens
  - Energy insecurity
How did we get here?

- Economic Factors
- The Regulatory Compact
- Key Moments in Utility History
- Utility Incentive Structure
- What’s Changed?
Economic Factors

Economies of Scale

• The electrification of America was driven by steam generation, which displays “economies of scale.”

• **Economies of scale**: reductions in cost as a result of increased production (the bigger, the better).

Natural Monopolies

• To have competing utilities would be wasteful as the benefits of economies of scale would not be realized (for companies and customers).

• This made utilities natural monopolies.

https://grist.org/climate-energy/utilities-for-dummies-how-they-work-and-why-that-needs-to-change/
https://www.thebalance.com/economies-of-scale-3305926
The Regulatory Compact

In the first decades of the 20th century, public power was growing fast. IOUs were desperate to make private utilities more appealing, so they endorsed a plan for close regulation through state commissions.

How it works:

In exchange for a monopoly in a service area, a utility is subject to the rulings of a Public Utility Commission (PUC) to determine rates, where and how much it can invest, and its profit margin, which, should be reasonable. This arrangement intends to ensure that reliable, low-cost electricity is available to all in the area. This overall system of regulation and governance is known as the regulatory compact.

https://grist.org/climate-energy/utilities-for-dummies-how-they-work-and-why-that-needs-to-change/
https://energycentral.com/c/iu/understanding-regulatory-compact
https://blog.aee.net/how-do-electric/utilities-make-money
Key Moments in Utility History

1935 – Public Utility Holding Company Act & Federal Power Act
• Gave communities the right to set up their own public utility if IOU service was unsatisfactory.

1936 – Rural Electrification Act
• Established the Rural Electrification Administration.
• Provided federal funds at low interest to co-ops and public entities to expand electric infrastructure to the American countryside.

• Exempted energy wholesalers from PUHCA, increasing choice.


Utility Incentive Structure

- More is more: More power plants means more money.
- Most of an IOU’s profits are generated via returns on investments, not through providing quality service.
- The regulatory compact limits competition for most IOUs.

https://grist.org/climate-energy/utilities-for-dummies-how-they-work-and-why-that-needs-to-change/
What’s Changed?

**Reduced Demand:** The primary concern of utilities and customers was once expanding electrification. Now, a variety of factors are causing the demand for energy to plateau or even fall.

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<tr>
<th>Causes</th>
<th>What this means for IOUs</th>
<th>Where can we go?</th>
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<tr>
<td>Energy Efficiency</td>
<td>Because the IOU business model is fueled by expansion, a decrease in demand for energy is a threat to profits.</td>
<td>Reduced demand is necessary to protect our communities and the environment, but the Investor-Owned model disincentivizes it. It’s time to explore other options.</td>
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<tr>
<td>Demand Response</td>
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<tr>
<td>Distributed Generation</td>
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</tbody>
</table>
Summary

- Utilities formed natural monopolies because of their economies of scale.
- The regulatory compact allows IOUs to function as monopolies while being regulated by state commissions.
- IOUs make money through investments in energy infrastructure, not for providing quality service.
- Today the demand for energy is falling.
Where can we go & how will we get there?

- The Just Transition Framework
- Alternatives to IOUs
- Other Developments
The Just Transition Framework

**Just Transition**: “a transition away from the fossil-fuel economy to a new economy; democratic governance; and ecological resilience” that provides “dignified, productive, and ecologically sustainable livelihoods.”

This includes:

- Transitioning the power and control over the means of energy production into the hands of the community
- Ensuring fair and equitable distribution of the benefits and burdens of energy production activities
- Centering the concerns of marginalized communities

https://climatejusticealliance.org/just-transition/
https://iejusa.org/section-1-defining-energy-justice/
A STRATEGY FRAMEWORK FOR JUST TRANSITION
RESIST — RETHINK — RSTRUCTURE

Extractive Economy

WORK

- Consumerism & Colonial Mindset
- Extraction Dig, Burn, Dump
- Exploitation

GOVERNANCE
- Militarism

PURPOSE
- Entourage of Wealth & Power

VALUE FILTER
- Shift economic control to communities
- Dismantle wealth and the workplace
- Advance ecological regeneration
- Drive racial justice and social equity
- Relocate food production and consumption
- Retain and restore cultures and traditions

Living Economy

WORK

- Caring & Sacredness

GOVERNANCE
- Deep Democracy

PURPOSE
- Ecological & Social Well-being

VALUE FILTER
- Shift economic control to communities
- Dismantle wealth and the workplace
- Advance ecological regeneration
- Drive racial justice and social equity
- Relocate food production and consumption
- Retain and restore cultures and traditions

Developed by Movement Generation with OUR POWER CAMPAIGN
COMMUNITIES UNITED FOR A JUST TRANSITION

JUST GIVING 2016
EDGE FUNDERS ALLIANCE VERSION

https://climatejusticealliance.org/just-transition/
Alternatives to IOUs

**Investor-Owned Utility (IOU)**
- IOU Purchases Power
- IOU Maintains Transmission Lines
- IOU Provides Customer Service

**CCA**
- CCA Purchases Power
- IOU Maintains Transmission Lines
- IOU Provides Customer Service

**Municipal Utility**
- Muni Purchases Power
- Muni Maintains Transmission Lines
- Muni Provides Customer Service

Alternatives to IOUs: CCAs

Community Choice Aggregation (CCA):
programs through which consumers “aggregate” their buying power to purchase energy from an alternative supplier, with the existing utility continuing to provide distribution and transmission services.

- CCAs are also referred to as “municipal aggregation” as they are often run through local government agencies.
- “Muni-lite”

https://www.epa.gov/greenpower/community-choice-aggregation
Alternatives to IOUs: CCAs

States with legislation authorizing the formation of CCAs:

California
Illinois
Massachusetts
New Jersey
New York
Ohio

Alternatives to IOUs: Public Power

Municipalization:
the replacement of an investor owned utility (IOU) with a public utility owned by the municipality.

Unlike IOUs, municipal utilities are not-for-profit, owned by the communities they serve, and managed democratically through a city council or an elected or appointed board.

https://www.publicpower.org/municipalization
https://www.publicpower.org/blog/municipalization-setting-record-straight
Alternatives to IOUs: Public Power

Benefits of Public Power

**Local Control:** Public power utilities are managed democratically.

**Affordability:** Residential customers of public power utilities pay 11% less than those of investor-owned utilities.

**Reliability:** Customers of public power utilities are likely to have power restored faster after outages.

**Environmental Responsibility:** 40% of public power is generated from non-carbon emitting sources.

**Community Investment:** Each year, $2 billion of public power utility revenues is invested directly back into the communities they serve.

**Increased Choice**

[https://drive.google.com/file/d/0BxqkHpiiFq_eWk9QR1jwNFRDSndzZEVwRmtWZkZFoXdWWTBn/view](https://drive.google.com/file/d/0BxqkHpiiFq_eWk9QR1jwNFRDSndzZEVwRmtWZkZFoXdWWTBn/view)
Alternatives to IOUs: Public Power

Public Power Success Stories:

Communities across the country have already started taking power into their own hands, some more than a hundred years ago.

2,011 Public Power utilities exist in the United States today. Three examples of public power are:

- Sacramento Municipal Utilities District
- Clyde Light & Power
- Winter Park Electric Utility Department

https://appvoices.org/2018/12/19/forming-a-municipal-utility/
https://www.publicpower.org/blog/municipalization-setting-record-straight
Other Developments

**Microgrids**: localized grids that can operate autonomously.

- Improves energy resilience.

**Community Solar**: local solar facilities are shared among community subscribers who receive credit on their electricity bills for the energy generated.

- Expands access to solar.

https://microgridknowledge.com/microgrids-businesses
https://www.conedsolutions.com/community-solar-simplified/
https://www.seia.org/initiatives/community-solar
Summary

• To achieve a just transition we must explore alternatives to Investor Owned Utilities.
• Municipalization tends to increase local control, lower rates, and improve service.
• Community Choice Aggregation offers some of these benefits without municipalizing fully.
• There are many promising new strategies to improve and democratize the grid, each with its own benefits and drawbacks.
How does COVID-19 affect utilities?

- The COVID-19 pandemic and its economic consequences have left many unable to pay their electricity bills.
- Across the country, many PUCs have issued orders suspending non-payment shutoffs. Others are relying on utilities to take this step voluntarily.
- A primary concern for utilities is recovering revenue that will be lost over the course of the State of Emergency, while customers, advocates, and some regulatory bodies are searching for solutions for those who are unable to pay.

https://www.publicpower.org/topic/covid-19
Additional Resources

- **Electricity Explained: How Electricity is Delivered to Consumers**

- **Utilities for Dummies: How they work and why that needs to change**

- **United States Electricity Industry Primer**

- **How do Electric Utilities Make Money?**
  [https://blog.aee.net/how-do-electric-utilities-make-money](https://blog.aee.net/how-do-electric-utilities-make-money)

- **NAACP Just Energy Policies and Practices Toolkit**
  [https://www.naacp.org/climate-justice-resources/just-energy/](https://www.naacp.org/climate-justice-resources/just-energy/)

- **Power to the People: Winning Control of Electric Utilities**

Visit [ijeusa.org](http://ijeusa.org) for a Utilities 101 guide, Utilities 201 materials on public power, an Energy Justice Workbook, and more.