

# Fighting Climate Change with Integrated Grid Planning



ENVIRONMENTAL LAW  
& POLICY CENTER

Electricity production is currently a leading cause of climate change, but it doesn't have to be. As dirty & expensive old coal plants shutter statewide, we can meet Illinois' energy needs by embracing energy efficiency, renewable resources, and a modernized electric grid. We cannot afford to waste limited funds on grid investments that don't help us maximize clean, efficient, and flexible energy options. We need **Integrated Grid Planning** to chart a wise path forward for Illinois.

## How does the electric grid work?

Historically, energy flowed in one direction. From large, centralized sources of **generation**, like coal plants, electricity traveled long distances on high-voltage **transmission** lines before being **distributed** at lower voltage to be **used** in homes and businesses. But today, energy is starting to flow in many directions. A homeowner with rooftop solar panels is both using and generating electricity, sharing extra with neighbors. Batteries can store energy anywhere along the grid, to be ready when needed. We need a more flexible and responsive system to maximize distributed energy resources and meet our energy needs efficiently with renewable resources.

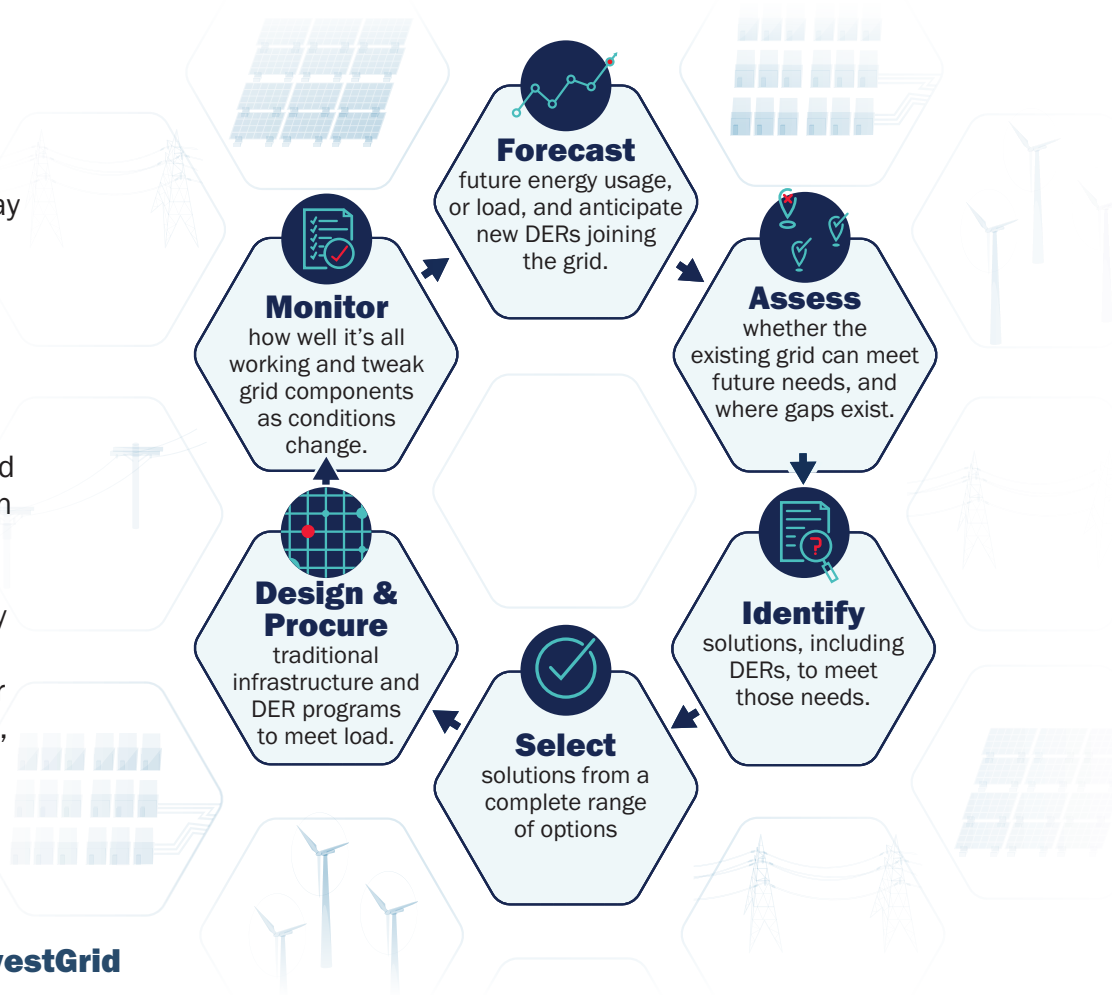


## Distributed Energy Resources (DERs):

- Rooftop & shared solar panels
- Battery storage
- Electric Vehicles
- Smart inverters, meters, thermostats, & other appliances
- Energy efficiency
- Demand response
- Microgrids
- Integrated volt/var optimization

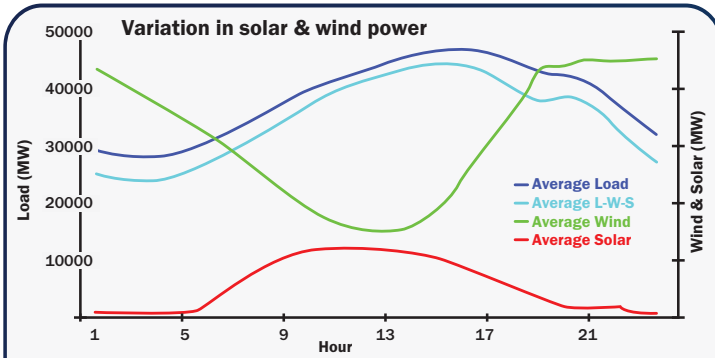
## What is Integrated Grid Planning?

For a long time, utilities made grid planning decisions behind closed doors. But today, everyday people and local communities must join in the conversation to accelerate climate change solutions, by investing in solar panels, electric vehicles, and other distributed energy resources (DERs). Integrated grid planning incorporates innovation and engagement from many stakeholders, to unlock the benefits of clean energy at every scale and at every step in the planning process. We can power Illinois with clean energy quickly, affordably, and equitably with integrated grid planning.



Read more at [elpc.org/MidwestGrid](http://elpc.org/MidwestGrid)

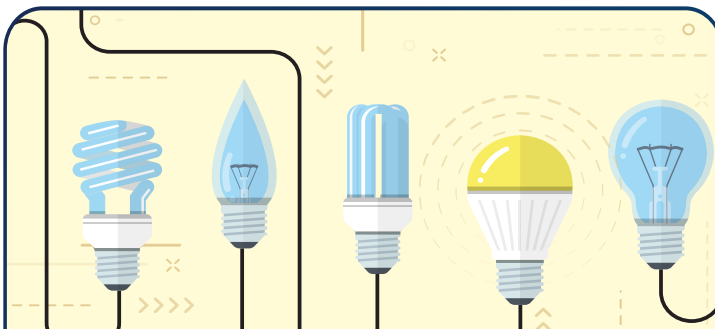
## Integrated Grid Planning Means More...



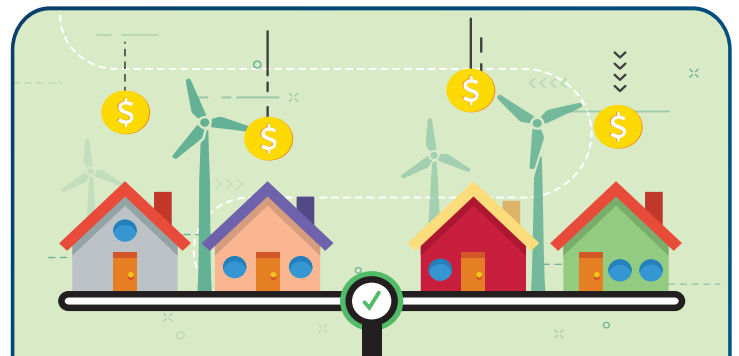
**Flexibility:** Renewable energy peaks at different times. A flexible grid can accommodate this variation, so energy is available when it's needed.



**Knowledge:** Technology and transparency empower customers to better understand their energy use and efficiency opportunities.

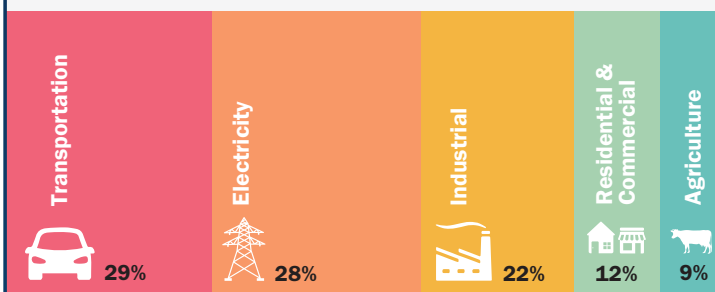


**Efficiency:** The fastest and most affordable way to reduce our environmental impact is to simply use less energy. With the right technology and knowledge, we can do more with less.

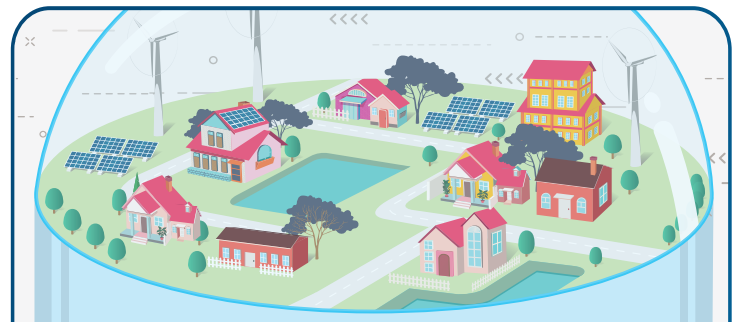


**Equity:** With transparent planning and targeted subsidies, everyone can share in the burdens and benefits of a just transition.

Sources of U.S. greenhouse gas emissions



**Sustainability:** As we shift away from fossil fuels to power buildings & transportation with clean electricity, the grid must be ready to embrace new opportunities.



**Reliability and Resilience:** Extreme weather caused by climate change threatens our vulnerable grid, but DERs can make neighborhoods more resilient in the face of disaster.

## ELPC's Midwest Grid Transformation Program

ELPC is leading a coalition of organizations, including GridLab, Vote Solar, Natural Resources Defense Council, Fresh Energy, Citizens Action Coalition, and Interstate Renewable Energy Council. We are working in Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, & Wisconsin to transform the energy grid for the future.