



# NextGrid Illinois

FEBRUARY 28 2018



# DISTRIBUTED ENERGY RESOURCES AND DER VALUE CONCEPTS

## CONSUMER INVESTMENT IN SOLAR PV DO THE DOLLARS AND CENTS MAKE SENSE?

SUSAN L. SATTER, PUBLIC UTILITIES COUNSEL, OFFICE OF THE ILLINOIS ATTORNEY GENERAL

FEBRUARY 28, 2018

2/27/2018

# COMMERCIAL AND INSTITUTIONAL SOLAR AND DER

---

## IIT Microgrid Motivators

- Reliability: IIT lost \$500,000 annually from outages
- IIT energy infrastructure at end of life
- Increased energy consumption
- Cost of purchased power

## IIT Microgrid Solution

- \$14 million total cost
- Simple payback 5 years

See [www.iitmico-grid.net/microgrid.aspx](http://www.iitmico-grid.net/microgrid.aspx)

## Commercial Motivators

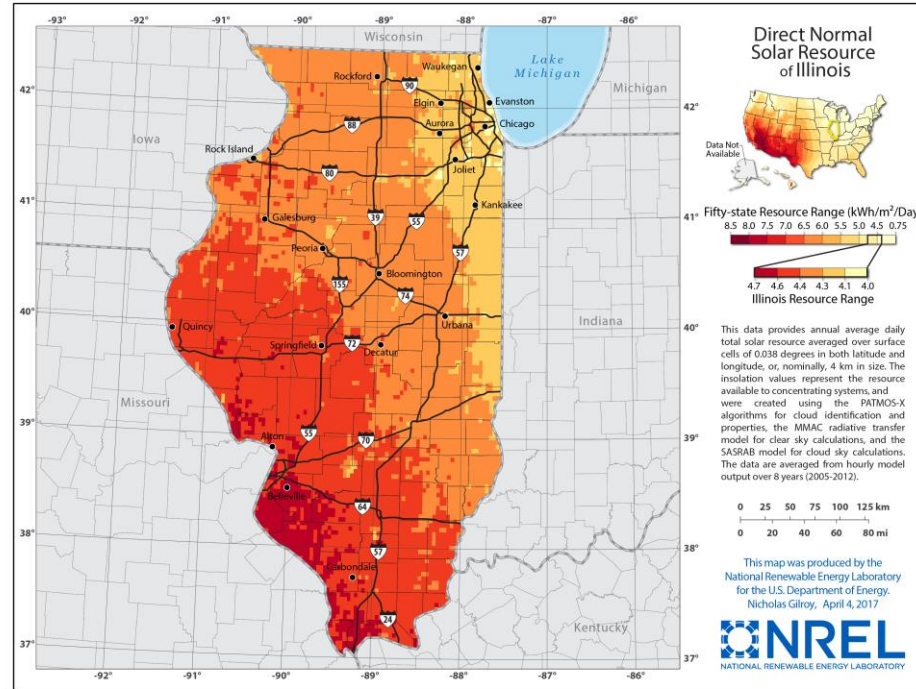
- Reducing cost of purchased power
- Reliability
- Going green

## DER or Microgrid Solution

- Positive benefit-cost analysis
- Storage as a bridge to back-up gen
- Private microgrid

2/27/2018

# WIDELY VARYING SOLAR RESOURCES IN ILLINOIS



Source: National Renewable Energy Laboratory, [www.nrel.gov/gis/solar.html](http://www.nrel.gov/gis/solar.html)

2/27/2018

# 10 LARGEST SOLAR STATES PER SEIA: SOLAR PV, UTILITY CENTS/KWH, SUN RESOURCES

State	Megawatts Solar	Percent Solar Utility Scale	Average Retail: EIA cents/kwh	Highest State Sun Resource Ranking
California	18,296	53.56%	15.23	>6.5
North Carolina	3,016	76.26%	9.2	5.0-5.5
Arizona	2,982	63.72%	10.33	>6.5
Nevada	2,191	73.03%	8.39	>6.5
New Jersey	1,991	25.11%	13.39	4.5-5.0
Utah	1,489	53.73%	8.72	6.0-6.5
Massachusetts	1,487		16.48	4.5-5.0
Georgia	1,432	6.98%	9.59	5.0-5.5
Texas	1,215	49.38%	8.43	6.0-6.5
NY	927		14.47	4.5-5.0
Illinois			9.38	4.5-5.0 4.0-4.5

# OTHER CONSUMER CONSIDERATIONS - ITS COMPLICATED

---

## 1. Understanding different charges on the electricity bill

- Delivery – fixed vs usage related charges ~ 44% of bill
- Supply – energy, transmission, capacity, PE, PEA, IPA or ARES supply ~ 45% of bill
- Other taxes and fees – based on usage, total bill, other? ~ 11% of bill

## 2. Relationship between on-site consumption and total production and net metering rules

## 3. Future costs and savings estimates

## 4. Effect on homeowners insurance, property value, sale or transfer of property, taxes

## 5. System Costs – downpayments and monthly charges

## 6. System and roof monitoring, maintenance, repair, removal of system

## 7. Warranties

## 8. Use of customer data

2/27/2018