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# Building Solar Energy through Municipal Aggregation

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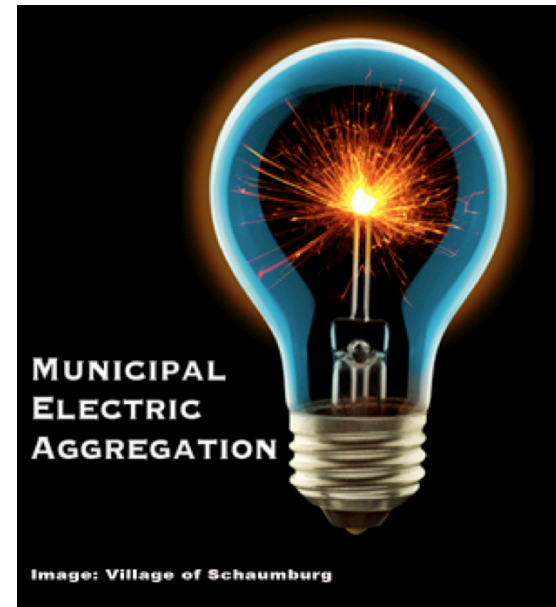
## Aggregation: Definition

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-A municipality aggregates demand from its residents & small businesses, and purchases electricity for them in bulk (vs. individuals choosing their utility)

-Has helped save customers money and support clean energy

-Over 70% of Illinois residents live in an aggregated community





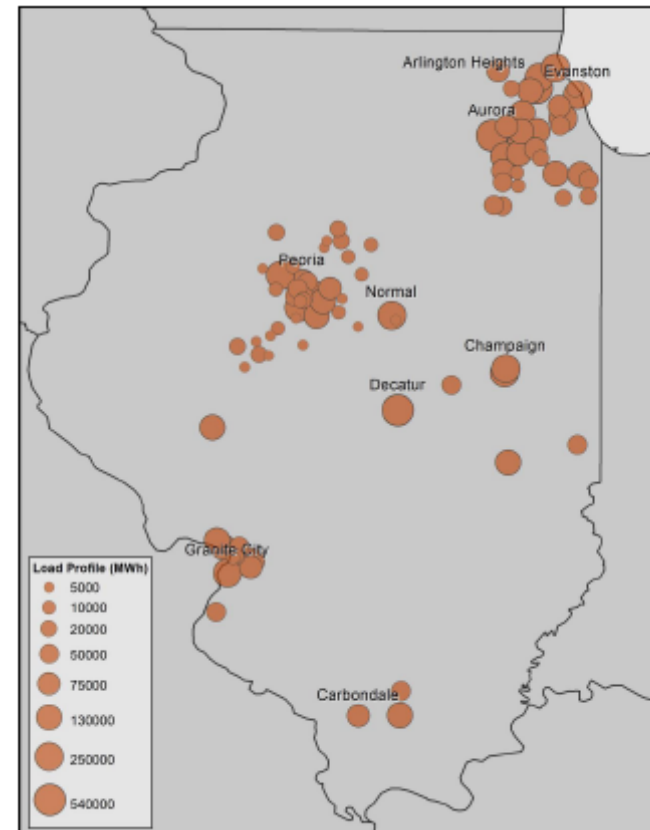
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## Past accomplishments

-Over 90 towns across Illinois have bought Renewable Energy Credits (RECs) to offset up to 100% of their energy supply

-Chicago:

- Largest aggregated city in US
- 5% of energy from IL wind
- Coal-free portfolio

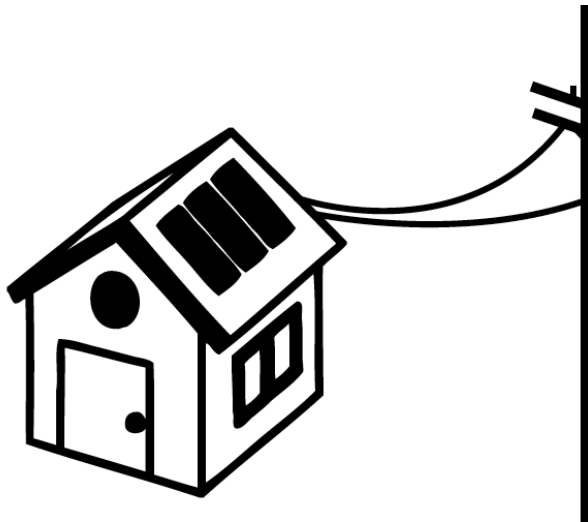




## RECs example

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### Renewable Energy Credits vs. Physical Electricity



**Example 1:**  
Rooftop solar panels generate 1000 kWh of electricity

Household consumes 800 kWh  
of electricity

Owner “sells” extra 200 kWh of  
electricity to grid (net metering)

Owner can sell 1000 kWh worth  
of RECs in state/regional markets  
for RPS compliance



## Option #1: Power content labeling

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- Request information on generators' fuel type & geographic location
- Review how different fuel mixes change the price of supply
- All IL municipalities can request this info under HB 2623 (2013)





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# Option #1: Power content labeling cont.

<b>Example 1: City of Cleveland</b>		
Fuel/Plant Type	% of Power Supply Portfolio	Anticipated Cost Premium Above Average Market Price
<b>Nuclear</b>		
<b>Coal</b>		
<b>Natural Gas</b>		
Combined Cycle		
Simple Cycle		
<b>Biomass</b>		
NEO Resources		
Ohio Resources		
Non-Ohio Resources		
<b>Hydro</b>		
NEO Resources		
Ohio Resources		
Non-Ohio Resources		
<b>Solar PV</b>		
NEO Resources		
Ohio Resources		
Non-Ohio Resources		
<b>Wind</b>		
NEO Resources		
Ohio Resources		
Non-Ohio Resources		
<b>Other</b>		
<b>TOTAL</b>		



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# Option #1: Power content labeling cont.

## Example 2: City of Chicago Municipal Pricing Proposal Form

Option	Description	Bidder Margin (\$/kWh) through May 2014	Bidder Margin (\$/kWh) through May 2015
0% Coal inclusion	Bidder provides a fixed margin (\$/kwh) to provide full-requirements supply to the City of Chicago municipal aggregation Members that relies on a fuel mix that contains 0% coal-based generation.		
No more than 10% Coal inclusion	Bidder provides a fixed margin (\$/kwh) to provide full-requirements supply to the City of Chicago municipal aggregation Members that relies on a fuel mix that contains no more than 10% coal-based generation.		
No more than 20% Coal inclusion	Bidder provides a fixed margin (\$/kwh) to provide full-requirements supply to the City of Chicago municipal aggregation Members that relies on a fuel mix that contains 20% coal-based generation.		



## Option #2: Carve-outs

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- Request that a certain % of your electricity come from renewable energy generators

  - Example: 5% of Chicago's energy from IL wind

- Important to request: Energy + RECs  
(Not RECs alone)

- Should exceed RPS goals (9% by 2014)

- Alternative: Part of energy supply, capacity, or RECs from a new local solar facility owned by the city







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## Option #3: Community Development Fund

- Community development fund: Finance local solar projects and/or EE
- Can be financed through lump-sum contribution from supplier, or rolled into electric rate the supplier offers
- Ideal for solar projects at government-owned buildings





## Option #4: Bundle Solar RECs

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-To participate in state or regional Renewable Energy Credit markets, RECs need to be bundled into groups of 1 MW or more



-1 MW equivalent to about:  
200 homes or  
40 businesses'  
rooftop solar systems

Solution: Supplier (in coordination with municipality) provides solar REC bundling service, selling RECs to state & regional markets



## Option #5: Instate and local RECs

- If RECs are the only option in your municipality, request that they come from instate solar or wind generators
- Include a preference for local RECs (i.e. within your town's borders)
  - Can help local schools, homeowners, etc. get an additional revenue stream & pay back their solar systems faster





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## For more information

[GoCleanGoLocal.org](http://GoCleanGoLocal.org)

-Be sure to check out our new report, “Leading from the Middle”

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How Illinois Communities Unleashed Renewable Energy