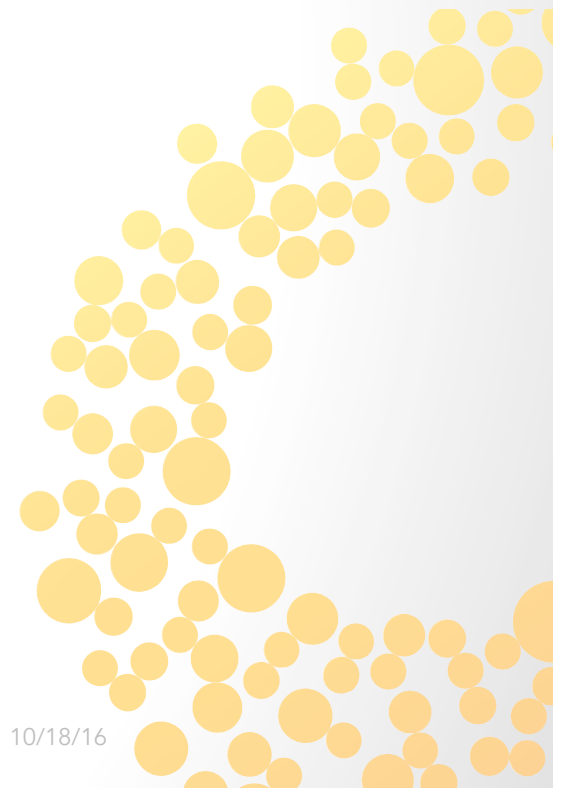


# A developer's perspective

Interfacing with Xcel, subscriber issues, and permitting



## The lay of the land, by the numbers...

- 34 months since the program launched
  - 400+ applications submitted day 1
- 400kW online
  - 4 individual projects
  - Average project size in queue: 3.75MW (803 MW, 214 sites)
- 1,253 projects withdrawn from the program
  - (1,204 MW at 214 different project sites)
  - Co-location limitations
  - Service territory issues
  - Financability
  - Permitting
  - Substation capacity or prohibitively high interconnection costs

## Working with [and grappling with] Xcel...

- Shifting timelines
  - ITC cliff
  - PUC programmatic changes
- Grid transparency
  - The black box of Xcel's distribution system
  - Info necessary to make educated site-selection decisions at the outset
  - Increased information by trial and error
- Construction "standards"
  - Disparity between Xcel's standards and what landowners and communities want (i.e. the pole farm issue)
- Conflicting interpretations of PUC directives

## Subscriber issues...

- Explaining complicated program mechanics in simple terms
  - REC ownership and “going green”
- Subscriber demands
  - Solar garden subscription allocation
  - Over-subscribing
  - Date certainty
- Credit requirements of financial partners
- Streamlining residential contracts
  - Balancing readability with financability
  - Balancing lenient termination provisions with financability
  - Non-negotiable

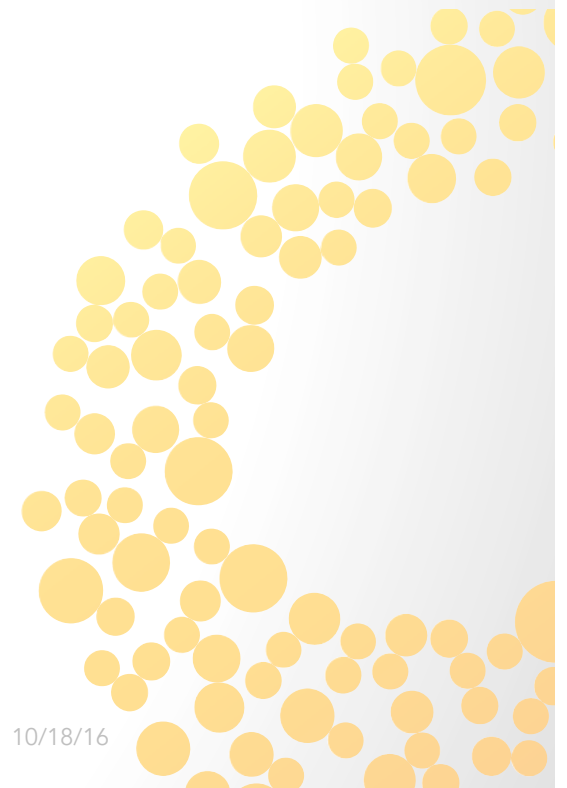


## Permitting community solar projects...

- The bad: moratoriums, misnomers and conflicting standards
  - NIMBYism and the fear of change
  - Preservation of farmland pitted against solar garden development
  - Misconceptions about solar technology (i.e. stray voltage, toxic panels, fire hazards, and propensity for attracting terrorism)
  - Solar panels treated as an impervious surface (MN PCA)
- The good: new ordinances, excited neighbors
  - Recognizing the need for clean energy
  - Preference for a solar garden over subdivisions

## Lessons learned...

- Examples and insights employed in programmatic markets across the country
  - Overall program size limitations
  - Project size caps
  - Residential subscription requirements
  - Low- and moderate-income carve-outs or incentives
  - Preferred development “zones”
  - Concrete timeframes



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