

The background features abstract, overlapping green geometric shapes in various shades of green, creating a modern and dynamic feel. The shapes are primarily triangular and polygonal, with some areas appearing more translucent than others.

# City of Northfield Community Solar Garden Subscription Update

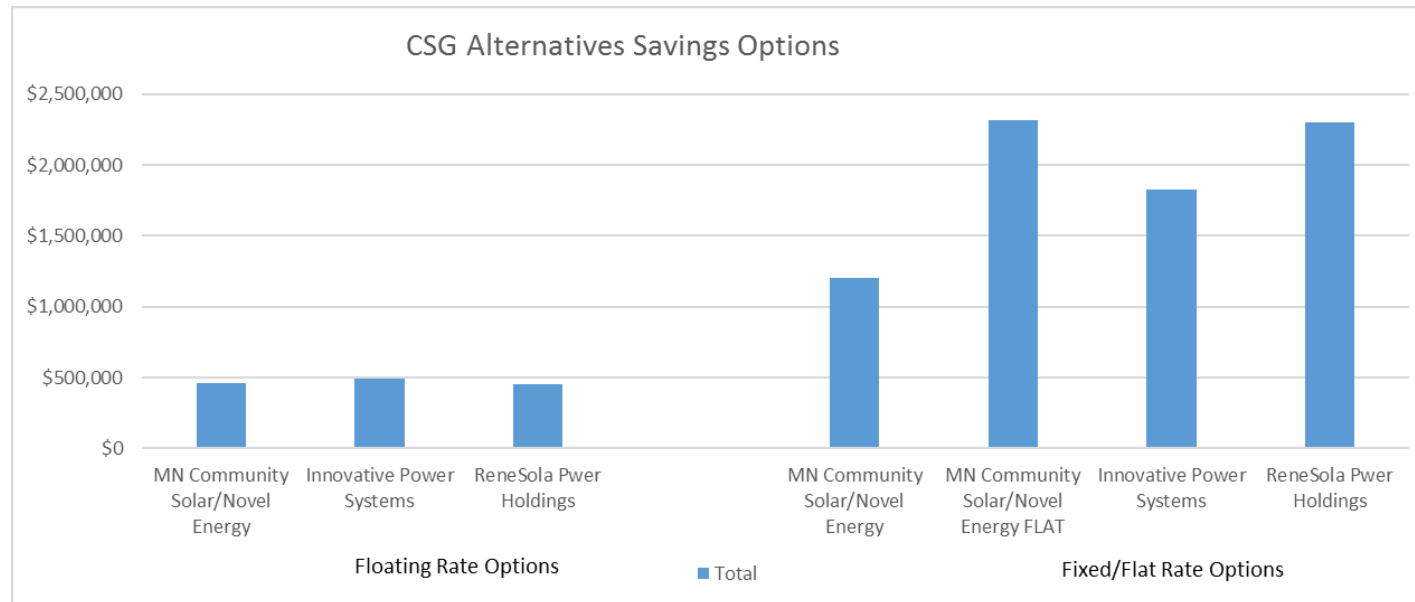
July 18, 2017

# Competitive Comparison

- ▶ Received updated proposals (using consistent assumptions - 1.5MW power usage and 2.75% annual Xcel rate increase) from 3 developers that currently have permitted projects in Rice County or an adjacent county
  - ▶ Innovative Power Systems
  - ▶ ReneSola
  - ▶ MN Community Solar/Novel Energy Solutions
- ▶ 3 types of programs were proposed; fixed, flat and floating rate options
  - ▶ A fixed rate option is set at a discount to Xcel's current rate and then escalates annually
  - ▶ A flat rate option is set at a discount to Xcel's current rate and it does not escalate
  - ▶ A floating rate option is set at a current discount and moves with Xcel's rate

# Competitive Comparison

- ▶ Financial Analysis of \$ savings potential, assuming Xcel rates increases at 2.75% per year
  - ▶ Savings are significantly less for fixed/flat rate options if Xcel rates increase less than 2.75%
  - ▶ Savings for the floating rate option are only less if you hit the floor price



# Financial Review

- ▶ Fixed/Flat rate proposals estimate larger savings than Floating rate proposals
- ▶ Fixed or Flat Savings
  - ▶ MN Community Solar \$1.2M fixed, \$2.3M flat
  - ▶ Innovative Power \$1.8M fixed
  - ▶ ReneSola \$2.3M flat
- ▶ Floating Savings
  - ▶ MN Community Solar \$458K
  - ▶ Innovative Power \$496K
  - ▶ ReneSola \$451K

# Qualitative Review

- ▶ MN Community Solar (a subsidiary of Novel Energy Solutions)
  - ▶ MN based, HQ St. Charles
  - ▶ Partners with Northfield Area Community Solar (NACS) - NACS will be redistributing commission back into Northfield community
- ▶ Innovative Power
  - ▶ MN based, HQ Roseville
  - ▶ Founded in 1991, Ralph Jacobson Founder/CEO
- ▶ ReneSola
  - ▶ International HQ, China
  - ▶ Founded in 2005, listed on the NYSE in 2008 (SOL)

# Qualitative Review

- ▶ MN Community Solar/Novel Energy Solutions
  - ▶ Cypress Creek Renewables (Financing Partner) has 5 gigawatts of local solar farms deployed or in development
- ▶ Innovative Power Systems
  - ▶ Partners with New Energy Equity and Washington Gas & Light (WGL) on many of their projects (WGL has a 120MW solar portfolio); this financing project could be local
  - ▶ 153 MW deployed or in development; 17 MW currently operating, 9.5MW under construction
- ▶ ReneSola - annual revenue 2017 expected \$900M to \$1B
  - ▶ 613MW projects "shovel-ready"

# References

- ▶ MN Community Solar
  - ▶ City of Dodge Center - subscribed to this garden
  - ▶ Hayfield Schools, Cotter Schools, City of Gibbon, City of Stewart, City of Ruthton
- ▶ Innovative Power Systems
  - ▶ Gardens: Metropolitan Council, City of Red Wing & Red Wing School District, City of Maple Grove, City of Minnetonka, University of Minnesota, Goodhue County Education District, Zumbrota Mazeppa School District
  - ▶ Rooftop Panels: Bethel Lutheran Church, Northfield, City of Waconia Ice Arena
- ▶ ReneSola
  - ▶ Rooftop panels at MSP International Airport parking garage

# Proposed Garden Location

- ▶ MN Community Solar
  - ▶ Waseca, Steele County
- ▶ Innovative Power Systems
  - ▶ Various locations in Rice County and adjacent counties Steele and Waseca
    - ▶ Waseca, Janesville, Morristown, Clinton Falls, New Richland (all 1MW gardens)
- ▶ ReneSola
  - ▶ Dundas, Rice County (near intersection of Dundas Blvd and 100<sup>th</sup> St E)

# Risks in a Community Solar Subscription

- ▶ 25 year term
- ▶ Rates drop - potential to pay higher price for solar if utility prices fall below the community solar subscription price
- ▶ Emergence of new technologies
- ▶ Termination fees apply if terminate prior to 25 year term
  - ▶ Subscriptions can be transferred internally or externally
- ▶ Long term viability of the provider could disrupt the program
  - ▶ Buy-out
  - ▶ Default

# Solar Garden Subscription Capacity

- ▶ City of Northfield has usage in both Rice and Dakota County
  - ▶ 5.5 MW total usage
    - ▶ 3.3MW usage in Dakota County (Wastewater treatment plant significant usage)
    - ▶ 2.2MW usage in Rice County
      - ▶ 1.7MW usage in Rice County, if Ice Arena is excluded
- ▶ Subscriptions to community solar gardens must be located in or adjacent to county with usage
  - ▶ Subscription decision needs to be based on usage in county and location of garden

# Legislative Update

- ▶ The program is changing from the Applicable Retail Rate (ARR) to the Value of Solar (VOS)
  - ▶ The ARR applies to gardens that had applications in prior to January 1, 2017, any new applications for gardens will be under the VOS program
    - ▶ ARR allowed garden size max of 5MW, VOS allows garden size max of 1MW
      - ▶ 1 subscriber has a limit of 40% of any garden, maxing Northfield's subscription size at 2.0MW under ARR or 0.4MW under VOS; covering Northfield's current usage would take significantly more subscriptions under new program than current program
  - ▶ ARR bill credits are larger than VOS bill credits will be (not yet set by Public Utilities Commission (PUC)) and would therefore, generate larger savings

# Recommendation

- ▶ Approve a subscription, pending legal review, to a community solar garden