

## ***Fair Solar Credit: Frequently Asked Questions; What is it? Why do we use it?***

Rooftop solar creates bill savings. Under net metering, customers receive bill savings at their full rate for offsetting their onsite energy needs with solar generation. They also receive bill savings for exporting generation back to the grid. The Fair Solar Credit is the rate at which the excess power is calculated to best reflect the value of energy being pushed onto the system at the time that it is being produced. In implementing this approach, the utility is trying to ensure fair cost allocation and protection of affordability, between our residents who do and do not have solar.

### **What is the Fair Solar Credit (FSC)?**

The Fair Solar Credit is a one-year lag indicator that reflects the value of energy being pushed onto the system at the time that it is being produced. This means it will change year to year based upon energy and capacity markets and transmission charges.

The Illinois Municipal Utilities Association (IMUA) hired Utility Financial Solutions (UFS) consulting firm to help create the Fair Solar Credit methodology for net metering. This FSC is calculated from the actual value of the capacity, energy, transmission and avoided distribution costs and losses from the prior calendar year. We incorporate this calculation to best reflect our actual avoided costs that are no longer incurred by the utility upon receipt of the customer's solar energy.

If we overvalue what we pay for the excess electricity solar pushes onto our system, it will be your neighbors that are picking up the tab (i.e. the difference). We are trying to ensure that your neighbors are not in effect subsidizing you. As a municipal utility, all costs are paid by you and your neighbors.

### **Why did we choose to use the Fair Solar Credit?**

Our city council believes this Fair Solar Credit calculation brings a stable, fair, and data-driven policy. All of the components of the FSC are based on publicly available data.

The city believes in the worth of solar and we are seeing an increase in the number of customers installing arrays. Solar does provide value to the grid. Therefore, in an open meeting, our city council passed and implemented a net metering policy trying to strike a balance for all our residents, those who own solar and those who do not own solar.

As a small non-profit utility, it is critical that our policies determine these solar incentive credits in a fair and cost-effective manner. We want to encourage solar while also ensuring ratepayers who do not (or cannot) adopt solar do not bear disproportionate costs for infrastructure and programs (wires, poles, linemen, system upgrades). Ensuring fair cost allocation and protecting affordability is a central rate design principle. As a city council, we must consider compensation frameworks for the full range of system costs and benefits to incorporate a desire for rapid solar adoption with the need to avoid undue rate impacts on non-participants. The importance of this balance is particularly acute for smaller utilities with fewer customers to spread costs across.

## ***More Explanation Required with Additional Details (Deeper Dive/How)***

### **How is the Fair Solar Credit Calculated?**

1. Avoided Cost of Energy
  - a. Energy prices fluctuate on an hourly basis throughout the year. The value that rooftop solar brings depends not only on the amount of energy, but also the timing of when it is provided. This is referred to as “the Real Time Weighted – Solar” value at the Regional Transmission Organizations (RTOs) locational marginal price (LMP). Essentially, solar only produces during hours of sunlight. IMUA reviews the value of energy for those hours of solar production.
2. Capacity savings (RTO Capacity Auctions)
  - a. The installation of solar-generating facilities reduces the capacity charges based upon the production of the system at peak periods and the annual capacity auction prices as established by RTOs.
3. Transmission Cost Avoidance
  - a. Transmission Costs are charged to utilities based on usage at system peak times. The installation of solar generating facilities has the potential for the reduction of certain transmission charges depending upon the production of the system at those peak periods.
    - i. First, IMUA utilizes the Transmission prices charged to the utility by the RTOs. IMUA then overlays the expected hourly solar production as determined by NREL PVWatts. The benefits of rooftop solar to the utility and to all of our customers are based upon the alignment of solar output hours with our system’s evening peaks (highest usage hour).
4. Distribution Losses
  - a. The last element of the FSC is credit for distribution losses. We also incorporate actual losses on the system. We have generically found it to be approximately 6%.

For residential and small commercial customers, we utilize a Fair Solar Credit (FSC) that is similar to the new way Ameren offers net metering but adjusted based upon how our city charges its rates for electricity. Current solar customers benefit by reducing their usage at the meter, which lowers their bill. This bill savings is at their full retail rate for their self-supply. They also “bank” excess generation that they do not use receiving the Fair Solar Credit. Customers also receive a Federal Income Tax Credit (FTIC) of **30%** for qualified expenditures on a solar system that provides electricity to their residence (energy.gov) and financial incentives for the environmental benefits of their solar can be accessed from the Illinois Shines Program (<https://illinoisshines.com/>)

This leaves only one piece of the several incentives available to solar customers, **the excess energy credit** (i.e. the Fair Solar Credit). This is when a customer’s solar array produces more solar energy than they use.

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### ***Valuation Fluctuation Question.***

#### **Why is the Fair Solar Credit different this year than last?**

1. Avoided Cost of Energy
  - a. Energy prices fluctuate on an hourly basis throughout the year. The value that rooftop solar brings depends not only on the amount of energy or capacity, but also the timing of when it is provided.
    - i. What does this mean?
      1. Essentially, solar only produces during sunlight and the market value of energy during the hours of solar production dropped from last year.
    - ii. How do I increase the value of energy my solar array produces?
      1. Consider installing a battery instead of pushing the overproduced energy to the grid. This would allow your stored energy to be used when the value of energy is higher.
2. Regional Transmission Organization (RTO) Capacity Auction Results
  - a. In 2024, capacity prices were higher than currently. Thereby, these auction prices set by regional transmission organizations flow through to rates, lowering the Fair Solar Credit (FSC) for 2025.
  - b. For 2026, new, recent increases in the regional transmission organization capacity auction prices will be reflected in future years fair solar credit calculations.
3. Transmission Cost Avoidance
  - a. Transmission Costs are charged to utilities based on system peak times. Benefits of rooftop solar to the utility and to all of our customers are reduced by the lack of alignment of solar output hours with our system evening peaks (highest usage hour). Over this past year, monthly solar peaks did not coincide with the system peak times (highest usage hour) as frequently, resulting in a decrease in transmission rates avoided.

While generally transmission rates have increased and look to keep increasing, the amount of those costs that solar generation avoided decreased. In 2023 (used for the 2024 FSC calculation), 25% of transmission rates were avoided. In 2024 (used for the 2025 FSC calculation), 14% of transmission rates were avoided. This translates as an 11% decrease in the amount of transmission costs avoided and therefore a lower Fair Solar Credit when compared to previous years.