

Winnetka Village Council
STUDY SESSION
Village Hall
510 Green Bay Road
October 10, 2019
7:00 PM

Emails regarding any agenda item are welcomed. Please email contactcouncil@winnetka.org, and your email will be relayed to the Council. Emails for a Tuesday Council meeting must be received by Monday at 4 p.m. Any email may be subject to disclosure under the Freedom of Information Act.

AGENDA

- 1) Call to Order
- 2) Public Comment
- 3) Net Metering2
- 4) Closed Session
- 5) Adjournment



Agenda Item Executive Summary

Title: Net Metering

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 10/08/2019

Consent: ☐ YES ☒ NO

☐ Ordinance
☐ Resolution
☐ Bid Authorization/Award
☒ Policy Direction
☐ Informational Only

Item History:

April 11, 2006 Council Study Session, pp. 28-32
August 12, 2008 Council Study Session
October 21, 2008 Council Meeting, pp. 18-32
November 18, 2008 Council Meeting, pp. 13-34
September 8, 2015 Council Study Session, pp. 12-14

Executive Summary:

At the November 18, 2008 Village Council Meeting, the Village Council adopted Ordinance No. MC-8-2008, amending the Village Code to add net metering provisions. The Village Council also adopted Resolution No. R-36-2008, amending electric rates to provide for renewable energy. The ordinance permitted an electric utility customer to install a renewable energy source (solar panels or wind unit) and deliver excess power into the Village's electric distribution system. The resolution established the calculation of Renewable Energy Production Credits. Energy delivered to the Village's electric system is credited at the equivalent wholesale unit price (\$ per kWh) budgeted under Purchased Power in the Electric Fund Budget.

Various customers and the Winnetka Environmental & Forestry Commission have asked the Village Council to re-examine the rate used to credit excess renewable energy delivered to the electric distribution system.

Recommendation:

Provide policy direction regarding the renewable energy production credit for energy delivered to the Village's electric system.

Attachments:

Agenda Report on Net Metering dated October 4, 2019
Exhibit A: Ordinance No. MC-8-2008, an Ordinance Amending Chapter 13.08 of the Winnetka Village Code To Provide For Net Metering For Certain Renewable Energy Sources
Exhibit B: Resolution No. R-36-2008, a Resolution Establishing Rates and Fees for Electric Service
Exhibit C: Environmental and Forestry Commission Recommendation Dated August 18, 2015
Exhibit D: Summary of Renewable Energy Credits (Existing Policy)
Exhibit E: Comparison of Options for Calculating Renewable Energy Credit

AGENDA REPORT

SUBJECT: Net Metering

PREPARED BY: Brian Keys, Director of Water & Electric

REF:

April 11, 2006	Council Study Session, pp. 28-32
August 12, 2008	Council Study Session
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DATE: October 4, 2019

Executive Summary

At the November 18, 2008 Village Council Meeting, the Village Council adopted MC-8-2008, amending the Village Code to add net metering provisions. The Village Council also adopted Resolution No. R-36-2008, amending electric rates to provide for renewable energy. The ordinance permitted an electric utility customer to install a renewable energy source (solar panels or wind unit) and deliver excess power into the Village's electric distribution system. The resolution established the calculation of Renewable Energy Production Credits. Energy delivered to the Village's electric system is credited at the equivalent wholesale unit price (\$ per kWh) budgeted under Purchased Power in the Electric Fund Budget.

Various customers and the Winnetka Environmental & Forestry Commission have asked the Village Council to re-examine the rate used to credit excess renewable energy delivered to the electric distribution system.

Background

In 2007, the Illinois legislature mandated net electricity metering for all investor owned electric providers, and to provide net metering up to 40kW capacity with one-to-one retail rate credit by April 1, 2008. These utilities were required to pay all cost of connection, carry credits forward one year, and were prohibited from requiring insurance. Municipal electric utilities were exempt from the legislation.

The Village first examined "photovoltaic billing options" at the April 11, 2006 Village Council Meeting. At that time, staff outlined a request from a resident to provide "net metering" with the intent of being the first solar house in Winnetka. Staff presented various billing / credit options for the Council's consideration. No further action or code changes were undertaken following the Study Session.

At the August 12, 2008 Study Session, the Village Council revisited the topic of net metering following the Illinois legislature's action that required investor owned utilities to offer net metering. At which time, staff noted concern that in the absence of a defined policy on net metering, that municipalities may face future regulation. The Council's consensus was to direct staff to move forward with drafting a policy for net metering with credits for energy returned to the electric distribution system being calculated at the wholesale power rate.

At the October 21, 2008 Village Council meeting, Ordinance MC-8-2008 was introduced, amending the Village Code to add net metering provisions and to permit the Water & Electric Department to accept excess power onto the distribution system with the appropriate protection for the system and other customers. The Council also introduced Resolution No. R-36-2008, amending electric rates to provide for renewable energy credits. At the time of introduction, it was noted that a homeowner was requesting net metering for a home under construction. At the meeting, the applicant and his attorney requested that the Village Council consider credits being calculated at the retail power cost.

At the November 18, 2008 Village Council Meeting, Ordinance MC-8-2008 (Exhibit A) and Resolution No. R-36-2008 (Exhibit B) were presented for adoption. Following Council discussion and public comments, the ordinance was amended and subsequently adopted. The policy adopted by the Village is summarized as follows:

- Defined renewable energy source as being powered by photovoltaic or wind generators.
- Capacity limit of 10kW
- Energy delivered to the electric system is credited at the equivalent wholesale unit price as contained in the Electric Fund Budget (i.e. wholesale cost).
- Systems must meet applicable industry standards (IEEE & UL).
- Customer provides documentation that general liability insurance does not exclude the operation of renewable energy source.
- Warning decal about possible back-feed from renewable energy source is placed on electric meter.
- Renewable energy is equipped with outdoor disconnect switch.
- The customer is responsible for all costs incurred by the Village that are in excess to those charged a customer without a renewable energy source.

During the period of 2014-2015, staff participated in various discussions on net metering with the Winnetka Environmental & Forestry Commission (EFC). During the annual update of Boards & Commissions at the September 8, 2015 Village Council Study Session, the EFC recommended that compensation for renewable energy credits be increased in proportion to the economic benefit of power supplied during both the base demand as well as the peak demand period (Exhibit C). The basis for this recommendation was based on examination by staff and the EFC of detailed solar output provided by a resident. Staff was able to examine historical solar output at different time intervals through each day over several months. The solar output was also reviewed at the coincident time of the electric system's peak demand. Beyond total consumption, the Village's wholesale electric bill includes a charge for the maximum hourly demand during a month. Based on review of the data, the resident's solar system provided little or no benefit to reducing the peak electrical demand during early spring, late fall or winter months. During summer months, the solar system did provide a small reduction to the Village's peak electric demand.

At the request of the WEFC, staff examined the financial impact that resulted when including the benefit of reducing the peak electrical demand. This analysis was limited to a single customer as similar interval solar output data was not available for two other customers with solar systems. The EFC recommended that compensation be increased to the average of the wholesale rate and the retail rate. In their recommendation, the EFC noted that ".....it seems best to lean toward a

policy that recognizes the true contribution of sustainable and renewable energy”. No further action or code changes were undertaken following the Study Session.

Net Metering 2019

At the present, there are four residential customers that receive renewable energy production credits on their utility bills. Bi-directional electric meters are installed at each location to measure the energy delivered to the customer and the energy delivered to the Village’s electric distribution system. Historically, individual customer credits range from \$0 - \$101 every two months. In 2018, the Village issued \$874.83 in renewable energy production credits for energy returned to the Village’s electric distribution system. These credits were calculated using the wholesale electric cost. A summary of the credits issued is contained in Exhibit D.

Municipal Policies

As previously noted, municipal electric systems are exempt from the state’s net metering act. Other municipal electric systems in northern Illinois have taken the following approach to net metering as it pertains to credits and fees:

Batavia: Customer pays \$100 fee for bi-directional meter installation. Any energy returned to the electric system is kWh credit (retail) on the next utility bill.

Geneva: Customer pays for bi-directional meter. Any energy returned to the electric system is kWh (retail) credit on next utility bill.

Naperville: Any energy returned to the electric system is kWh credit (retail) on the next utility bill.

St. Charles: Customer pays the cost of bi-directional meter. Any energy returned to the electric system is credit based on wholesale cost of electricity.

Options for Determining Renewable Energy Credits

In order to facilitate the Council’s review of this policy, staff has identified four perspective options:

Option 1: No change in existing policy. Any energy delivered to the Village’s electric system would be credited at the budgeted rate for wholesale “Purchased Power” (account #500.41.27-560). For 2019, this rate is \$0.06619 per kWh.

Option 2: Revise the rate to provide net metering at the full retail rate for any energy delivered to the Village’s electric system. For 2019, the rate for residential customers would be as follows:

Summer Rate: \$0.1324 per kWh

Winter Rate: \$0.1182 per kWh

Option 3: Implement the recommendation of the EFC. Any energy delivered to the Village’s electric system would be credited at the average of the wholesale rate and the retail rate. Using this approach, the rates for excess energy delivered to the Village’s distribution system would be as follows:

Summer Rate: \$0.09930 per kWh

Winter Rate: \$0.09220 per kWh

Option 4: Although the prior analysis was limited to a single customer's solar output, it appears that solar output has the potential to reduce the Village's peak electrical demand during summer months. Another alternative structure for the summer months is to credit any energy delivered to the Village's electric system at the retail rate. The Village Code (Section 13.08.15) currently defines rates for summer service as the four consecutive months with ending meter dates on or after June 1st of each year. All other months would be credited at the wholesale rate. Under this option, the credit would be determined as follows:

June – September: \$0.1324 per kWh

All other months: \$0.6619 per kWh

Using historical data for the existing customers with solar systems, Exhibit E shows the financial impact of each option.

Other Considerations:

Staff is anticipating additional interest in solar projects in upcoming months. Under the State of Illinois Future Energy Jobs Act (FEJA), the Illinois Power Agency (IPA) was required to develop programs to promote solar facilities. The IPA determined that solar projects that operate in municipal and electric cooperative utility territories qualified to participate in these solar incentive programs. ComEd filed an objection to the IPA plan, seeking relief through the court system. On September 30, 2019, The Supreme Court denied ComEd's attempt to have a lower court's ruling reversed. With this decision, ComEd's appeals have been exhausted and the current decision allowing FEJA incentives in municipal utility service areas will stand. As result, Winnetka customers are eligible for the IPA's solar incentive program (now called "Illinois Shines"). Municipal customers must still adhere to any local utility interconnection and net metering policy.

Recommendation

Provide policy direction regarding the renewable energy production credit for energy delivered to the Village's electric system.

ORDINANCE MC-8-2008

**AN ORDINANCE AMENDING
CHAPTER 13.08 OF THE WINNETKA VILLAGE CODE
TO PROVIDE FOR NET METERING
FOR CERTAIN RENEWABLE ENERGY SOURCES**

WHEREAS, the Village of Winnetka (“Village”) owns and operates an electric utility that provides all electric service within the Village; and

WHEREAS, technological developments in the generation of electricity make it financially feasible for individual retail customers to generate power for their personal use; and

WHEREAS, the Council of the Village of Winnetka (“Village Council”) have determined that allowing individual retail customers to generate power for their personal use from certain renewable energy sources, allowing excess power generated from such sources to be returned to the power grid for distribution to other customers, with credits being granted for producing such power, may help to reduce the load on the Village’s electrical system and benefit the environment; and

WHEREAS, the Village Council have determined that allowing credit for individual power production requires an interconnection with the Village’s electric distribution system; and

WHEREAS, the Village Council have determined that it is necessary to establish standards and regulations for individual power production to protect the physical integrity of the Village’s electric distribution system and to assure that the load in the Village’s electric utility system is sufficient to provide reliable, competitively priced power to all of the Village’s customers; and

WHEREAS, the Village of Winnetka is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970, with the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village; and

WHEREAS, the Village Council find that all matters pertaining to the operation of the Village's electric utility, including but not limited to establishing standards and rates for electric service, are matters pertaining to the affairs of the Village.

NOW, THEREFORE, the Council of the Village of Winnetka do ordain:

SECTION 1: The foregoing recitals are hereby incorporated by reference as the findings of the Council of the Village of Winnetka, as if fully set forth herein.

SECTION 2: Subsection B of Section 13.08.010, "Electric service by Village," of Chapter 13.08, "Municipal Electric System," of Title 13 of the Winnetka Village Code, "Municipal Utility Services," is hereby amended to provide as follows:

C. Use of Municipal Electric Utility Required. Every location within the corporate limits of the Village that uses electricity shall be connected to the Municipal Electric Utility. Except as otherwise provided in section 13.08.260 of this chapter, all All-electric service to any location within the corporate limits of the Village shall be provided by the Municipal Electric Utility.

SECTION 3: Section 13.080.030, "Meters," of Chapter 13.08, "Municipal Electric System," of Title 13 of the Winnetka Village Code, "Municipal Utility Services," is hereby amended to provide as follows:

Section 13.08.030 Meters.

A. Meters Required. Unless otherwise specifically provided in this chapter, all electric services shall be metered.

B. Meters to Be Provided by Village. The Water and Electric Department shall provide meters to be located upon all premises furnished with electric service, for the purpose of metering the quantity of electric energy supplied by the Village to such premises. All meters shall be owned and maintained by the Water and Electric Department at its expense. Notwithstanding the foregoing, any customer that requires a bi-directional or other custom meter to allow for the registration of energy obtained from a renewable source pursuant to sections 13.08.155 and 13.08.260 of this chapter, shall be responsible for all costs related to the purchase, installation, maintenance, repair and replacement of such meter to the extent those costs exceed the costs related to standard meters used by customers that are not connected to a renewable energy source. (Ord. MC-228-99 § 6 (part), 1999: prior code § 9.03)

C. Meter Pedestals. The meter pedestal or meter enclosure for underground electric service shall be provided by the customer and shall be owned and maintained at the customer's expense.

SECTION 4: Chapter 13.08, "Municipal Electric System," of Title 13 of the Winnetka Village Code, "Municipal Utility Services," is hereby amended by adding a new Section 13.08.155, which shall be title "Credits for Certain Renewable Energy Sources" and shall provide as follows:

Section 13.08.155 Credits for Certain Renewable Energy Sources.

A. Any customer that has installed a solar or wind generating unit of 10 kW or less in accordance with the standards established by section 13.08.260 of this chapter shall be eligible, upon submitting a written request, to receive a credit for energy delivered to the Village of Winnetka.

B. The formula for calculating the Renewable Energy Production Credit shall be established by

resolution of the Village Council introduced at one meeting and adopted at a subsequent meeting.

C. The Renewable Energy Credit shall be separately itemized and shown on the face of the customer's bill.

SECTION 5: Chapter 13.08, "Municipal Electric System," of Title 13 of the Winnetka Village Code, "Municipal Utility Services," is hereby amended by adding a new Section 13.08.260, which shall be title "Standard for Renewable Energy Sources" and shall provide as follows:

Section 13.08.260 Standards for Renewable Energy Sources.

A. Permitted renewable energy sources. Any renewable energy source must be powered by photovoltaic or wind generators. A customer may have more than one renewable energy source, provided that the combined generating capacity of all such sources does not exceed 10 kW.

B. Technical requirements. No customer shall be allowed to take power from a renewable energy source that does not meet or exceed all of the standards set forth in the following paragraphs of this subsection. The customer shall be responsible for having the power generating facility tested every three years for compliance with these standards and for promptly submitting the test results to the Director of Water and Electric. Failure to provide the test results in a timely manner may be cause for disconnection without further notice:

1. IEEE Std. 929-2000 Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

2. IEEE Std 1547-2003 IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems

3. IEEE Std 1547.1-2005. Title. IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

4. UL 1998, Software in Programmable Components.

5. UL 1741, Inverters, Converters, Controllers, and Interconnection Systems for use with Distributed Energy Resources

6. NEC Article 690 – 2008, Solar Photovoltaic Systems

C. Additional requirements.

1. Any person supplying power and energy to the Village shall indemnify the Village, its officers, employees, agents and assigns from all liability and losses of any kind resulting from the customer's operation of the renewable energy source.

2. The customer shall provide proof that the customer maintains general liability insurance that does not exclude liability and losses related to the customer's operation of the renewable energy source.

3. Every renewable energy source shall bear a decal or sticker warning of a possible backfeed from the renewable source. The identifying decal or sticker shall be in a form approved by

the Director of the Water and Electric Department and shall be installed on the face of the electric meter.

4. All renewable energy sources shall be equipped with an outdoor disconnect switch with provisions for padlocking in the open position for the protection of workers and the public. The disconnect switch shall be clearly marked and placed within five feet (5') of the electric meter.

D. Financial responsibility of customer. The customer shall be responsible for all costs incurred by the Village of Winnetka that are in excess of those that would be charged a customer without a source of Renewable Power and Energy.

SECTION 6: This Ordinance is passed by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 7: This Ordinance shall take effect immediately upon its passage, approval and posting as provided by law.

PASSED this 18th day of November, 2008, pursuant to the following roll call vote:

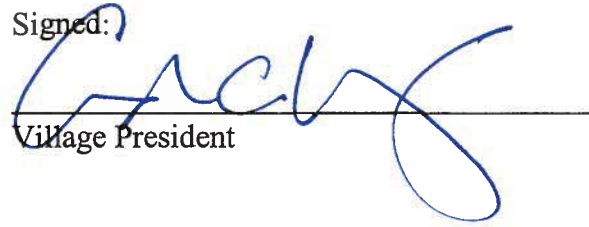
AYES: Trustees Behles, Berger, Greable, Johnson, Poor, Rintz

NAYS: None

ABSENT: None

APPROVED this 18th day of November, 2008.

Signed:


Village President

Countersigned:


Village Clerk

Introduced: October 21, 2008

Posted: October 22, 2008

Passed and Approved: November 18, 2008

Posted: November 19, 2008

RESOLUTION NO. R-36-2008

**A RESOLUTION ESTABLISHING RATES AND FEES
FOR ELECTRIC SERVICE**

WHEREAS, the Village of Winnetka is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970; and

WHEREAS, pursuant to Article VII, Section 6 of the Constitution of the State of Illinois of 1970, the Village of Winnetka has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village, including, but not limited to, the powers (i) to regulate for the protection of the public health, safety, morals and welfare, (ii) to license, (iii) to tax, and (iv) to incur debt; and

WHEREAS, the Village of Winnetka owns and operates an electric utility that provides all electric service within the Village of Winnetka; and

WHEREAS, the Village of Winnetka's Electric Department is responsible for the day-to-day operations of the Village's electric utility; and

WHEREAS, the Council find that all matters pertaining to the operation of the Village's electric utility, including but not limited to establishing rates for electric service, are matters pertaining to the affairs of the Village.

NOW, THEREFORE, be it resolved by the Council of the Village of Winnetka as follows:

SECTION 1: As used in this Resolution, the following terms, phrases and words and their derivations shall have the meanings given in this section, unless the context or use clearly indicates another or different meaning is intended:

Customer Charge: A fixed charge based on the type of service rather than the amount of electricity used.

Demand Charge: A charge based on the rate at which electric energy is delivered, expressed in kilowatts (kW), averaged over a 30-minute period.

Energy Charge: A volume based charge for energy used.

Load Factor: The ratio of energy used to the maximum energy consumption for a given monthly peak demand.

On-peak Demand: A peak demand that occurs between the hours of 3:00 p.m. and 9:00 p.m.

Off-peak Demand: A peak demand that occurs between after 9:00 p.m. and before 3:00 p.m.

Primary Lines: High voltage power lines

Secondary Lines: Low voltage power lines that extend from the high voltage Primary Lines and distribute electricity to individual property lines.

Service Lines: The power lines that extend from the Secondary Lines to the individual meter connections located on each parcel of property that receives electric service.

SECTION 2: **Seasonal Rates.** Separate summer and winter rates shall be established for demand charges and customer charges. Pursuant to Section 13.08.150 of the Winnetka Village Code, summer rates shall be in effect for each of the four consecutive months with ending metered dates on or after June 1 of each year.

SECTION 3: **Electric Rates.** Each customer using electricity furnished by the Village of Winnetka Water and Electric Department shall be charged for such service in accordance with the following schedule of electric rates, as provided in Section 13.08.040 of the Winnetka Village Code.

A. **Customer Charge:** Each customer shall be charged a monthly customer charge of \$9.46 for Single Phase Service or \$15.76 for Three Phase Service, except that this Customer Charge does not apply to customers subject to Energy and Demand Charges under Rate 18.

B. **Energy and Demand Charges:** In addition to the Customer Charge, each customer shall pay energy and demand charges at the rates set forth in the following Schedule of Energy and Demand Charges.

SCHEDULE OF ENERGY AND DEMAND CHARGES

Rate 1 - Residential: (Section 13.08.080 of the Winnetka Village Code)

Energy Charge

Summer Rate	\$0.1121 per kWh
Winter Rate	\$0.0974 per kWh

Rate 2 - Space Heating Customers: (Section 13.08.090 of the Winnetka Village Code)

Energy Charge

Summer Rate	\$0.1118 per kWh
Winter Rate	
First 750 kWh	\$0.1000 per kWh
All over 750 kWh	\$0.0652 per kWh

Rate 3 - Commercial: (Section 13.08.100 of the Winnetka Village Code)

Demand Charge

Summer Rate	
First 50 kW	\$0.00 per kW
All over 50 kW	\$11.27 per kW
Winter Rate	
First 50 kW	\$0.00 per kW
All over 50 kW	\$9.91 per kW

Energy Charge

Summer Rate	
First 15,000 kWh	\$0.1094 per kWh
All over 15,000 kWh	\$0.0812 per kWh
Winter Rate	
First 15,000 kWh	\$0.0959 per kWh
All over 15,000 kWh	\$0.0713 per kWh

Rate 4 - School and Government: (Section 13.08.110 of the Winnetka Village Code)

(a) With an annual peak demand of up to 1,000 kW:

Demand Charge

Summer Rate	\$10.82 per kW
Winter Rate	\$9.01 per kW

Energy Charge

Summer Rate	
First 100,000 kWh	\$0.0641 per kWh
Over 100,000 kWh	\$0.0577 per kWh
Winter Rate	
First 100,000 kWh	\$0.0587 per kWh
Over 100,000 kWh	\$0.0534 per kWh

(b) **With an annual peak demand exceeding 1,000 kW:**

Demand Charge

Summer Rate

On Peak	\$10.82 per kW
Off Peak	\$6.62 per kW in excess of On Peak Demand

Winter Rate

On Peak	\$9.01 per kW
Off Peak	\$6.76 per kW in excess of On Peak Demand

Energy Charge

Summer Rate

First 100,000 kWh	\$0.0641 per kWh
Over 100,000 kWh	\$0.0577 per kWh

Winter Rate

First 100,000 kWh	\$0.0587 per kWh
Over 100,000 kWh	\$0.0534 per kWh

Load Factor Credit

(\$0.005) per kWh for kWh in excess of
50% based upon the on-peak demand

Rate 6 - Water Heating: (Section 13.08.120 of the Winnetka Village Code)

Energy Charge

Summer Rate	\$0.0979 per kWh
Winter Rate	\$0.0979 per kWh

Rate 7 - Large Residential: (Section 13.08.130 of the Winnetka Village Code)

Demand Charge

Summer Rate	\$9.91 per kW
Winter Rate	\$8.33 per kW

Energy Charge

Summer Rate	\$0.0820 per kWh
Winter Rate	\$0.0713 per kWh

Rate 18 - Street Lights: (Section 13.08.140 of the Winnetka Village Code)

Energy Charge

Summer Rate	\$0.0921 per kWh
Winter Rate	\$0.0921 per kWh

SECTION 4: Wholesale Power Purchase Cost Adjustment.

A. **Wholesale Power Purchase Cost Adjustment formula.** The electric system's cost of purchasing power shall be estimated at least once per year. The estimated annual

purchase cost shall be prorated among all rate classes by establishing the cost of purchase per kWh, which cost shall be added to the base rates set by Village Council resolution. The actual annual cost of purchasing power shall be determined after the close of each fiscal year. Pursuant to Section 13.08.160 of the Winnetka Village Code, the Wholesale Power Purchase Cost Adjustment shall be calculated as the difference between the estimated annual cost per kWh of purchasing power and the actual annual purchase power cost per kWh incurred during the prior fiscal year. If the actual annual cost per kWh of purchasing power exceeds the estimated cost, the shortage shall be annualized and shall be recovered by billing all customers at the same amount per kWh, beginning with all bills issued on or after May 1 of the new fiscal year. If the estimated annual cost per kWh of purchasing power exceeds the actual cost, the excess shall be annualized and shall be credited to all customers at the same amount per kWh, beginning with all bills issued on or after May 1 of the new fiscal year.

B. Wholesale Power Purchase Cost Adjustment Catch-up. Notwithstanding the foregoing, the accumulated shortfall in recovered purchase power costs shall be calculated after the close of the 2007-08 fiscal year, and such accumulated shortfall shall be prorated among all rate classes on a per kWh basis for recovery over a three-year period (Wholesale Power Purchase Cost Adjustment Catch-up), beginning with all bills issued on or after May 1, 2008, and continuing through April 30, 2011, (the Recovery Period). The Wholesale Power Purchase Cost Adjustment Catch-up shall be added into the Wholesale Power Purchase Cost Adjustment charges billed during the Recovery Period.

SECTION 5: Renewable Energy Production Credit

A. Terms.

1. Eligible Customer. A customer of the Village's Electric Utility who satisfies all of the requirements of Section 13.08.260 of the Winnetka Village Code.

2. Renewable Energy Production Credit, or REPC, means the actual credit as calculated pursuant to the formula in subsection B, below.

3. Renewable Energy, or RE, means the amount of energy, measured in kWh, delivered to the Village by an Eligible Customer.

4. Wholesale Purchase Power Cost, or WPPC, means the allocation on a per kilowatt hour basis of the total annual cost of purchasing power shown in the annual budget line item for "Purchased Power – Contractual Services."

B. Calculation of REPC

$$\text{REPC} = (\text{RE} \times \text{WPPC})$$

C. REPC Carry-forward. If the REPC exceeds the cost of the power and energy billed to the Eligible Customer by the Village in a billing period, the excess REPC will be carried forward from one billing period to the next, except that no amount shall be carried forward past the end of the calendar year and that any amount of energy in kWh reflected in carry-forward credits remaining at the end of the calendar year shall be deemed to have been provided to the Village at no charge.

D. No refunds or transfers. No Eligible Customer that terminates electric service from the Village for any reason, shall be entitled to a refund of any REPC balance. The account of any Eligible Customer that terminates electric service from the Village for any reason shall be closed and no REPC balance shall be transferred to any succeeding customer. The amount of kWh reflected in any REPC in existence at the time of an Eligible Customer's termination of electrical service will be deemed to have been provided to the Village, at no charge.

SECTION 6: Undergrounding Surcharge. Pursuant to Section 13.08.240 of the Winnetka Village Code, the following surcharges are hereby established for the undergrounding of transmission and distribution lines:

RATE U - UNDERGROUNDING SURCHARGE

- (a) **Surcharge.** Except as provided in subsection (c), each customer located in a Project Area within which the Primary Lines and Secondary Lines are placed underground pursuant to section 9.22 of the Winnetka Village Code shall be subject to an undergrounding surcharge. The surcharge shall be charged monthly until the Applicable Project Cost, plus interest on the unpaid balance at a rate of 7% per annum, is fully paid. The surcharge shall not be charged for more than 60 consecutive months. The surcharge amount shall be as follows:

Surcharge UA	Monthly surcharge of \$100 if Applicable Project Cost equals \$5,000 or less.
Surcharge UB	Monthly surcharge of \$150 if Applicable Project Cost is greater than \$5,000 but does not exceed \$7,500.
Surcharge UC	Monthly surcharge of \$200 if Applicable Project Cost is greater than \$7,500 but does not exceed \$10,000.
Surcharge UD	Monthly surcharge of \$250 if Applicable Project Cost is greater than \$10,000 but does not exceed \$12,500.

- (b) **Definitions.** The following definitions shall be used in determining the undergrounding surcharge:

Project Area: The service area covered by a petition for undergrounding, as determined by the director of water and electric, and shall include the Primary Lines, Secondary Lines and Service Lines within that service area.

Project Costs: All direct costs of undergrounding the Primary Lines and Secondary Lines in the Project Area ("Cost 1"). For customers with overhead Service Lines, the direct costs of undergrounding overhead Service Lines in the Project Area ("Cost 2") shall be included in the Project Costs in addition to Cost 1. Direct costs shall include, but not be limited to, labor, materials, recording of easements and the cost of relocating all related electric utility facilities and equipment, such as pad mount transformers and switch gear.

Project Cost_{UG} : the Project Cost per customer with underground Service Lines, which shall be determined by dividing Cost 1 by the number of customers in the Project Area.

Project Cost_{OH}: the Project Cost per customer with overhead electric service, which shall be determined by dividing Cost 2 by the number of customers in the Project Area with overhead electric service and adding the resulting amount to Project Cost_{UG}.

Applicable Project Cost: the Project Costs as allocated to the individual customers in the Project Area. The Applicable Project Cost for each customer with underground Service Lines shall be Project Cost_{UG}. The Applicable Project Cost for each customer with overhead Service Lines shall be Project Cost_{OH}.

- (c) **Exceptions to Surcharge.** The undergrounding surcharge shall not be charged to any customer in the Project Area who pays the Applicable Project Costs in full before the project begins.

SECTION 7: Disconnection or Reconnection Fee. The following fees shall be charged and collected for service calls to disconnect or reconnect service as the result of nonpayment, as provided in Section 13.08.060 of the Winnetka Village Code:

SERVICE DISCONNECTION OR RECONNECTION FEE

<u>Time of Service Call</u>	<u>Fee</u>
During regular business hours (Monday through Friday, except for holidays, from 8:00 a.m. to 4:30 p.m.)	\$85.00 per service dispatch
All other times (Evenings, nights, weekends and holidays)	\$245.00 per service dispatch

SECTION 8: Replacement of Touchpad. The following fees shall be charged for replacement of removed touchpads and replacement of the touchpad wiring.

Replacement of Touchpad	\$85.00
Replacement of Touchpad Wiring	\$245.00

SECTION 9: Costs of Adding, Upgrading and Undergrounding Electric Services.
The costs of installing new electric service, upgrading electric service to increase capacity and converting overhead service to underground service shall be allocated as follows:

Installation and Ownership of Facilities: All existing facilities and equipment, and all facilities and equipment related to new service, upgraded service and underground conversions, up to the meter, shall be owned, operated and maintained by the Village of Winnetka Water and Electric Department. The meter pedestal or meter enclosure shall be provided by the customer, at the customer's expense, and shall be owned and maintained by the customer. The Water and Electric Department shall install all new electrical service lines, all meters, all service upgrades and all conversions of overhead service to underground service, regardless of the party initiating the conversion, except that the Water and Electric Department shall not perform any work on the customer's side of the meter.

New Service or Increased Load: The following fees shall be charged for installing new or larger electric services:

Installation of a 200 Ampere service	\$8,700
Installation of a 400 Ampere service	\$14,500
Installation of three phase service	as below

The costs of providing three phase electric service, including the cost of any necessary relocation, replacement or extension of the primary, secondary lines and transformers to which the service line is connected, shall be paid for by the customer requesting the new or increased three phase service.

If a primary or secondary line must be relocated, replaced or extended in order to install a new service or to increase the load capacity of an existing service, any customer who connects to such primary or secondary line within five years after the its installation may be required to pay that customer's pro rata share of such costs. The Village Manager, in the exercise of his discretion, may enter into a written agreement with the initial requesting customer and establish terms for the payment of such costs, which may include a recapture provision that provides for the Village to refund such pro rata costs, less administrative costs in the

amount of 10% of the recaptured amount, to the initial requesting customer.

Service Lines – Scheduled Conversion to Underground Service: A customer may choose either to maintain overhead service or to convert his service line from overhead service to underground service in conjunction with the Water and Electric Department's planned conversion undergrounding of the primary and secondary lines to which the customer's service line is connected. If the customer elects to maintain overhead service, the Water and Electric Department will install, at no additional cost to the customer, a new pole as close to the service connection as the Department deems possible, placing the service line underground to the pole, installing a service riser to the top of the pole, and connecting an overhead line to the existing service connection. If the customer elects to place the service line underground, the Water and Electric Department will do so, at no additional cost to the customer, provided the customer purchases the meter enclosure or meter pedestal and makes, at the customer's expense, all alterations necessary to relocate the meter and building service so as to connect to the underground service line in the location specified by the Water and Electric Department.

Underground Service – Customer Requested Conversion: All costs of converting overhead electrical service to underground electrical service, including the cost of any necessary relocation of the primary and secondary lines to which the service line is connected, shall be paid by the customer if it is requested by the customer and the conversion is not done as part of the Water and Electric Department's undergrounding program.

SECTION 10: Temporary Electric Service. Pursuant to Section 13.08.210 of the Winnetka Village Code, temporary electric service provided during building construction shall be billed at the rate applicable to the use specified in the building permit.

SECTION 11: Fee for Returned Payments. A fee of \$30.00 shall be charged for any payment that is returned to the Village for any reason, including, but not limited to, insufficient funds, account closed, or referred to maker.

SECTION 12: Payment Period; Late Fees. All bills issued for electric service shall be paid in full within the payment period specified in the bill. The payment period shall be established by the Director of Finance, and shall be no less than 21 no more than 30 days from the date of the issuance of the bill. Pursuant to Section 13.08.040.B of the Winnetka Village Code, if any bill for electric service is not paid within the payment period prescribed by

resolution, a late payment penalty of 5% of the amount due shall be added to the bill and collected from the user.

SECTION 13: This Resolution is adopted by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 14: Effect of Resolution. This resolution supersedes Resolution R-11-2008.

SECTION 15: Effective Date. This resolution shall be in full force and effect immediately upon its adoption.

ADOPTED this 18th day of November, 2008, pursuant to the following roll call vote:

AYES: Trustees Behles, Berger, Greable, Johnson, Poor, Rintz

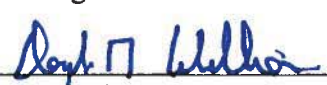
NAYS: None

ABSENT: None

Signed:


Village President

Countersigned:


Village Clerk

Introduced: October 21, 2008

Adopted: November 18, 2008

Exhibit C

AGENDA REPORT

SUBJECT: **Renewable Energy Production Credits**

PREPARED BY: Charles Dowding, Chair Environmental and Forestry Commission

REF:

DATE: August 18, 2015

Executive Summary

For some time the WEFC has been urged to investigate the feasibility or advisability of increasing compensation to Winnetkans who supply solar power to the grid. The WEFC recommends that compensation be increased in proportion to the economic benefit of the power supplied during both the base demand as well as the peak demand. This recommendation is the result of lengthy discussion with staff, a detailed calculation by staff, deliberation by the WEFC and finally a vote to bring this forward to the Village Council for consideration. The WEFC believes that such compensation is good policy irrespective of minor detailed considerations.

Background

The current policy provides credits for those individuals supplying renewable energy (i.e. solar panels) to Winnetka's grid equal to the base price that Winnetka pays the Illinois Municipal Electric Agency (IMEA) for its power, the wholesale price. This wholesale price is approximately ½ the cost of supplying power to residential customers, the retail price. The additional expense is that of operating Winnetka's grid. On annual basis, the Village Council approves retail electric rates which are set by balancing the need to recover wholesale power costs, capital improvements, and operating needs while maintaining competitive electric rates.

The State of Illinois created legislation to compensate customers who supply renewable energy (40kW and smaller) to investor owned electric utilities at the retail rate. This is roughly twice what Winnetka pays providers of solar power. There are those who say retail compensation means that the other customers are providing the solar power suppliers with a free distribution system. There are others who say that this rate of compensation is worth the price to encourage production of power in a renewable and sustainable fashion.

The WEFC asked staff the following question to explore an alternative to compensation at the base wholesale rate. Is the current rate of compensation justifiable if the benefits of reduction of peak power demand are taken into account knowing that the cost of power at peak times is more expensive?

Basis for the Recommendation

At the present, there are three homes in Winnetka with solar panels that have requested connection to the Village's electrical system. One of these customers utilizes a third party internet based system to track the performance of the solar panels which includes capturing time stamped data for both the power and energy generated by the solar panels. The customer

released this data to the WEFC and staff to facilitate further examination of the policy on renewable energy credits.

Using twelve consecutive months of data that covered the period of August 2012 through July 2013, staff was able to examine the solar system output at different points in the day. Staff reviewed the solar output at the coincident time of the Village's electrical system peak demand for each month. Beyond total energy consumed during the month, the Village receives a charge for the maximum hourly demand that occurs in each month. As such, reducing the peak hour demand; reduces the wholesale electric bill. As one might expect, the solar system provided little or no benefit to reducing the peak demand during early spring, late fall or winter months. During summer months, the solar output did provide a small measurable reduction to the Village's peak electric demand.

Using the customer's solar output data and the Village's readings from the bi-directional electric meter, it was determined that approximately 40% of the energy generated from the customer's solar system is placed on the Village's electrical system. This energy generates a credit on the customer's electric bill at a unit rate (\$/kWh) equivalent to the wholesale electric rate.

At the request of the WEFC, staff examined the financial impact that resulted when including the benefit of reduced peak electrical demand in conjunction with varying credit amounts for the renewable energy returned to the Village's electric system. Staff presented information on net metering and the results of their review to the WEFC in the accompanying PowerPoint presentation. The results are summarized in the table below.

Cost to Village of Winnetka for Solar Panel Implementation (Using data from Winnetka Customer)							
Assuming 40% kWh delivered back to Winnetka							
Date	Current Policy (Wholesale rate)	Using \$0.07/kWh Credit	Using \$0.08/kWh Credit	Proposed Policy (Average of Wholesale and Retail)	Using \$0.09/kWh Credit	Using \$0.10/kWh Credit	Retail Rate
12-Aug	-\$15.61	-\$13.07	-\$10.96	-\$8.71	-\$8.85	-\$6.74	-\$1.82
12-Sep	-\$8.62	-\$4.83	-\$1.66	\$1.70	\$1.50	\$4.66	\$12.03
12-Oct	\$9.09	\$12.85	\$15.98	\$16.97	\$19.11	\$22.24	\$29.54
12-Nov	\$7.41	\$10.58	\$13.23	\$14.06	\$15.87	\$18.52	\$24.68
12-Dec	\$3.37	\$4.87	\$6.12	\$6.51	\$7.37	\$8.62	\$11.53
13-Jan	\$5.05	\$8.45	\$10.67	\$11.64	\$12.90	\$15.12	\$20.30
13-Feb	\$4.20	\$7.16	\$9.10	\$9.94	\$11.03	\$12.97	\$17.48
13-Mar	\$7.15	\$12.43	\$15.89	\$17.39	\$19.34	\$22.79	\$30.84
13-Apr	\$7.85	\$13.95	\$17.93	\$18.53	\$21.92	\$25.90	\$35.19
13-May	-\$14.01	-\$8.67	-\$4.23	-\$2.83	\$0.22	\$4.66	\$15.02
13-Jun	-\$26.02	-\$20.88	-\$16.59	-\$12.03	-\$12.30	-\$8.02	\$1.97
13-Jul	-\$46.97	-\$41.68	-\$37.27	-\$32.57	-\$32.85	-\$28.44	-\$18.16
12 Month Total	-\$67.11	-\$18.83	\$18.21	\$40.61	\$55.25	\$92.30	\$178.60

Positive numbers in red boxes indicate the utility incurred additional cost. Negative numbers in green boxes indicate the utility benefited. As such, compensation for renewable energy could be

increased to a rate higher than the wholesale electric rate. The WEFC recommends that the compensation be increased to the average of the wholesale and the retail rate to index the compensation. The council can decide what it feels is in the best interest of the Village. Regardless of the choice, it seems best to lean toward a policy that recognizes the true contribution of sustainable and renewable energy. Compensation at the average between wholesale and retail indicates that each of the some 5,031 customers would compensate those supplying net solar power by less than \$ 0.01 per year per customer above their true contribution.

Early in WEFC's deliberations the cost of meter reading by a separate meter technician was added to the costs to the Village of compensation for provision of net solar power. It was then determined that additional training of lower level meter reading personnel could reduce the cost to read bi-directional meters. The table above includes no consideration of the administrative costs of net metering.

It is recognized that the analysis is based on a single customer. At this time, the data for the two other customers is not available and/or collected. Staff has been unable to find similar data from customers outside of Winnetka.

Recommendation

Consider providing policy direction on increasing the renewable energy production credits to an amount that is the average between the wholesale rate and the retail rate.

Exhibit D
Summary Of Renewable Energy Credits (Existing Policy)

Summary of Renewable Energy Credits – All customers

Year	Credit Earned (wholesale rate)
2016:	\$573.02
2017:	\$545.23
2018:	\$874.83
2019 (YTD July):	\$493.84

Summary of Renewable Energy Credits – Customer “A”

Year	Credit Earned (wholesale rate)
2016:	\$26.90
2017:	\$33.46
2018:	\$48.78
2019 (YTD July):	\$46.33

Summary of Renewable Energy Credits – Customer “B”

Year	Credit Earned (wholesale rate)
2016:	\$365.49
2017:	\$309.14
2018:	\$321.02
2019 (YTD July):	\$202.34

Summary of Renewable Energy Credits – Customer “C”

Year	Credit Earned (wholesale rate)
2016:	\$180.64
2017:	\$202.63
2018:	\$338.43
2019 (YTD July):	\$176.86

Summary of Renewable Energy Credits – Customer “D”

Year	Credit Earned (wholesale rate)
2016:	N/A
2017:	N/A
2018:	\$166.60
2019 (YTD July):	\$68.31

Exhibit E

Comparison Of Options For Calculating Renewable Energy Credit

Summary of Renewable Energy Credits – All customers

Year	Option #1 Existing Policy – Credit Earned At Wholesale Rate	Option #2 Credit Earned At Retail Rate	Option #3 Credit Earned At Average of Wholesale Rate & Retail Rate	Option #4 Credit Earned At Retail (June- Sept.), Wholesale (other months)
2016:	\$573.02	\$1,072.60	\$822.81	\$839.83
2017:	\$545.23	\$1,045.14	\$795.19	\$807.95
2018:	\$874.83	\$1,631.47	\$1,253.15	\$1,271.99
2019 (YTD July):	\$493.84	\$926.63	\$710.24	\$702.47

Summary of Renewable Energy Credits – Customer “A”

Year	Option #1 Existing Policy – Credit Earned At Wholesale Rate	Option #2 Credit Earned At Retail Rate	Option #3 Credit Earned At Average of Wholesale Rate & Retail Rate	Option #4 Credit Earned At Retail (June- Sept.), Wholesale (other months)
2016:	\$26.90	\$49.67	\$38.28	\$36.35
2017:	\$33.46	\$63.77	\$48.62	\$47.82
2018:	\$48.78	\$89.51	\$69.15	\$64.21
2019 (YTD July):	\$46.33	\$88.14	\$67.23	\$71.49

Summary of Renewable Energy Credits – Customer “B”

Year	Option #1 Existing Policy – Credit Earned At Wholesale Rate	Option #2 Credit Earned At Retail Rate	Option #3 Credit Earned At Average of Wholesale Rate & Retail Rate	Option #4 Credit Earned At Retail Rate (June-Sept.), Wholesale (other months)
2016:	\$365.49	\$683.75	\$524.62	\$534.27
2017:	\$309.14	\$592.27	\$450.70	\$456.60
2018:	\$321.02	\$596.89	\$458.95	\$458.55
2019 (YTD July):	\$202.34	\$377.89	\$290.12	\$279.54

Summary of Renewable Energy Credits – Customer “C”

Year	Option #1 Existing Policy – Credit Earned At Wholesale Rate	Option #2 Credit Earned At Retail Rate	Option #3 Credit Earned At Average of Wholesale Rate & Retail Rate	Option #4 Credit Earned At Retail (June- Sept.), Wholesale (other months)
2016:	\$180.64	\$339.19	\$259.91	\$269.21
2017:	\$202.63	\$389.11	\$295.87	\$303.53
2018:	\$338.43	\$631.59	\$485.01	\$494.17
2019 (YTD July):	\$176.86	\$328.88	\$252.87	\$237.71

Summary of Renewable Energy Credits – Customer “D”

Year	Option #1 Existing Policy – Credit Earned At Wholesale Rate	Option #2 Credit Earned At Retail Rate	Option #3 Credit Earned At Average of Wholesale Rate & Retail Rate	Option #4 Credit Earned At Retail (June- Sept.), Wholesale (other months)
2016:	N/A	N/A	N/A	N/A
2017:	N/A	N/A	N/A	N/A
2018:	\$166.60	\$313.48	\$240.04	\$255.07
2019 (YTD July):	\$68.31	\$131.72	\$100.02	\$113.73