

CITY COUNCIL COMMUNICATION



MEETING DATE: August 13, 2024

ITEM NUMBER: 12.C

SECOND READING:

{{customfields.ResoOrdNumber}}

TYPE OF ITEM: General Business

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SUBJECT/AGENDA TITLE:

Proposed Changes To Section 14.32 Relating To Distributed Energy Resource (DER) Interconnection Standards, Solar Energy Rates, Renewable Power Purchase Program (RPPP), and Community Solar

EXECUTIVE SUMMARY:

Given the rising public interest in solar, distributed energy resources (DERs), electric vehicle (EV) charging, and beneficial building electrification, City staff has been discussing areas in Longmont's municipal code that need to be updated to address increased adoption of these technologies. By updating these items, staff aims to improve City processes and support Council priorities by enabling more local renewable resources and adapting to emerging technologies. Improvements in these areas are stepping-stones for reaching the City's transition to a 100% renewable electric supply by 2030.

Staff has discussed the following topics with Council and made specific recommendations on each. Please note, Community Solar has been discussed at a high level with Council, but further detail and staff recommendations are contained in this communication:

- DER interconnection policies
- Solar energy rates
- Renewable Power Purchase Program (RPPP) rate
- Community Solar rate

In August 2023, staff first informed Council that a review of solar credit rates was underway, and staff would return with the results of that study at a future date. On February 9, 2024, staff brought a high-level overview of DERs, and the topics outlined above to the Council Retreat, and then returned at a Regular Session on April 12, 2024, to provide a review of recommended updates for Council's consideration and discussion and with an outline of the proposed public engagement to occur prior to returning to Council for direction. Based on



successful public engagement, staff seeks Council direction to prepare ordinances with a target date for these to become effective January 1, 2025.

COUNCIL OPTIONS:

1. Direct staff to prepare amendments to the municipal code
2. Do not direct staff to prepare amendments to the municipal code

RECOMMENDED OPTIONS:

Direct staff to prepare amendments to the municipal code.

FISCAL IMPACT & FUND SOURCE FOR RECOMMENDED ACTION:

N/A

BACKGROUND AND ISSUE ANALYSIS:

To prepare for a future with much higher levels of DER adoption within our community, staff has reviewed the relevant City codes to recommend changes that will encourage and assist in the development of local renewable resources, integration of DERs into the electric grid, and beneficial building and transportation electrification adoption and deployment. Specifically, staff has analyzed current interconnection policies, the credit rate paid for net excess solar energy returned to the grid, the rate paid by customers participating in the RPPP, and community solar subscriber rates, and has prepared recommended changes for Council's discussion and direction.

Interconnection Policies

Staff has identified that the City's current interconnection policies for DERs on the distribution grid should be updated to better reflect the increasing adoption of DERs and to offer provisions for new construction/ownership, beneficial building and transportation electrification, and future demand response programming.

Staff recommends amending the ordinance as follows:

- 1) Increase maximum allowable generation to a system size of 12kW or 200% of average annual consumption, whichever is greater.
- 2) Establish a standard 6 kWh of generation per sq. ft. of floor area for new construction, new ownership, or adoption of electrification measures to address unique circumstances in which the 12kW standard system size is insufficient for the anticipated electric load.
- 3) Include other DERs (e.g., battery storage, bi-directional EV charging, etc.) to capture any resource that could back feed into the grid.
- 4) Create interconnection standards to establish requirements for generation and energy storage, system interconnections, and system engineering studies.

5) Establish communications/data protocols based on industry standards.

Solar Rates

Credit Rate for Net Metering

Currently, the City credits solar customers for their excess energy production at the RGEN retail energy rate. This means that solar customers are credited the same rate for the surplus electricity they generate and sell back to the City as they pay to purchase electricity from the City. Furthermore, all solar energy produced and self-consumed on site is valued at retail as the customer is purchasing less energy from the grid at the per-kWh retail rate. In 2022, the last year for which there is complete data, the City paid a premium of just over \$64,000 to customers for net metering credits beyond what the City could have spent instead to purchase that power directly from Platte River Power Authority (Platte River) at the wholesale rate. The money to pay this credit comes out of the electric fund, meaning all electric customers are subsidizing the credit payments to these solar customers for their excess energy production.

Legacy Rate

As proposed, implementing a legacy rate for existing solar customers preserves the economic model used when they invested in their systems and means that the legacy credit rate will adjust to match the retail rate before sunsetting. Staff originally recommended a 20-year legacy rate but after further study, is now recommending a 15-year legacy rate instead. This recommendation is based on the estimated return on investment for typical residential solar customers within the City of Longmont, as well as a review of when existing solar systems were interconnected.

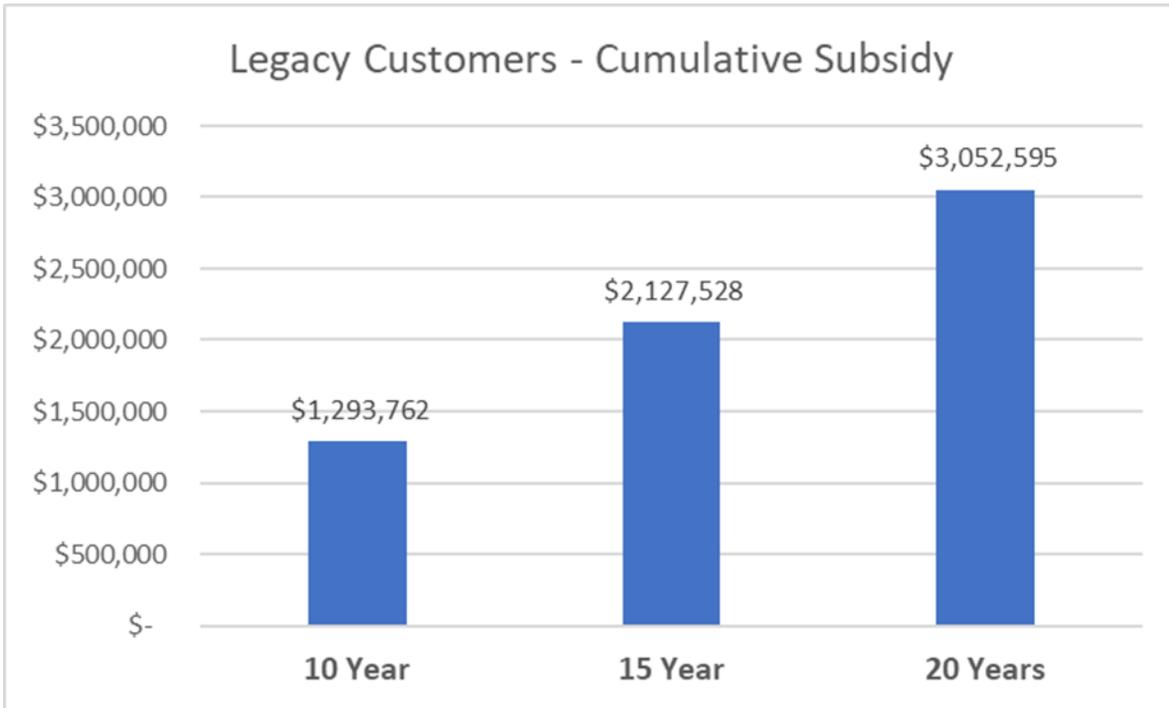
Staff has estimated that the payback period for residential solar customers in Longmont ranges from 11 to 19 years, with a variety of variables dictating the time to recover costs, including:

- Home size
- Energy efficiency/weatherization
- Electrification (building or transportation)
- Behavior/energy patterns
- Financing vs. cash purchase

Approximately 75% of the solar systems in Longmont have come online since 2019. To protect the investment of those customers with systems less than 5 years old, staff is recommending a 15-year legacy timeframe.



Staff has estimated the subsidy (the additional cost to purchase excess power at retail rather than wholesale) that would be paid under the current rate to legacy customers over a 15-year period and determined it would be approximately \$2,127,528, or \$141,835 a year.

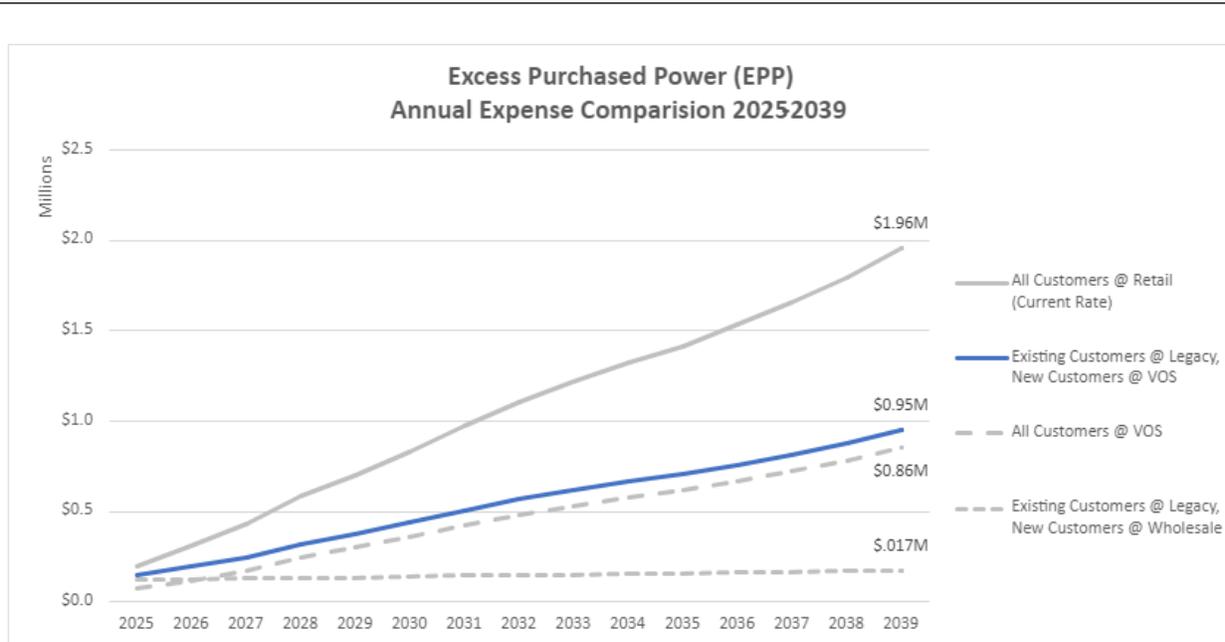


Value of Solar (VoS) Rate

Staff is recommending the City adopt a Value of Solar (VoS) rate for new solar customers. This VoS rate includes a premium over wholesale of 3% for line losses (this accounts for inefficiencies in transmitting and delivering energy across wires from Platte River to customers) and 15% for positive environmental impacts, such as avoided particulates in the atmosphere and reduced fugitive methane. Therefore, the applied VoS rate is calculated to be 18% above the wholesale energy rate paid to Platte River, which is less than the retail rate.

The graph below is a 15-year projection of the excess purchased power (EPP) credit payment under four scenarios:

1. All solar customers remain at current retail rate (status quo).
2. Existing solar customers remain at the 15-year legacy rate and new solar customers are credited at a VoS rate.
3. All solar customers are credited at a VoS rate.
4. Existing solar customers remain at a 15-year legacy rate and new solar customers are credited at a wholesale rate.



Note: Staff has aligned solar generation forecasts with the *Dunsky DER Forecast and Potential Study* completed in 2023, load growth data, and local historical net solar energy generation data.

Staff recommends implementing the following (highlighted by the blue line in the chart above):

- 1) A legacy credit rate for a 15-year period for existing solar customers that matches the residential retail energy rate each year.
- 2) A VoS credit rate for new solar customers.

Renewable Power Purchase Program (RPPP)

In addition to reviewing solar energy credit rates, staff evaluated the premium paid by RPPP participants to ensure it accurately reflects the current cost of renewable resources coming from Platte River. As a result, staff proposes to make the rate more affordable, reducing it by 66% from \$0.03120 to \$0.01034 based on Platte River’s current costs of procuring renewable energy (plus line losses and/or other administrative expenses). As part of the regular rate process, the RPPP will be re-evaluated in future years.

Community Solar

Staff has mentioned to Council and other interested stakeholders that efforts are underway to construct solar on a city-owned facility, from which the energy generated would be used for community solar subscriptions. A significant amount of time has been spent to design a community solar program in which at least 50% of the benefits (in the form of a 20% energy discount) would be allocated among income-qualified (IQ) residential customers. This program design effort has included technical advising from the National Renewable Energy

Lab (NREL) and the American Public Power Association (APPA) via the National Community Solar Partnership (NCSP) effort. Staff further engaged with local municipalities, nonprofits, and utilities that have launched community solar programs through a Technical Advisory Group (TAG) held in January 2024.

In support of the program design and in preparation of having the program live in Q1 2025, staff is recommending Council direct staff to prepare an ordinance to adopt community solar rates, which include both a 20% discount for income qualified customers and 20% charge (similar to the existing RPPP rate) for 'market-rate' program participants that want to support local solar.

Public Engagement

As a part of the interconnection standard and solar energy credit update process, staff undertook a robust public engagement campaign during the summer of 2024 and has developed an outreach plan to take place following Council direction.

Stakeholder Engagement:

- Sustainability Coalition
- Sustainability Advisory Board (SAB)
- Equitable Climate Action Team (ECAT)
- Neighborhood Group Leaders Association (NGLA)
- Sustainable Resilient Longmont (SRL)

During the five (5) stakeholder engagement opportunities, participants largely supported the proposed changes and understood the need to limit net metered credit subsidies while enabling larger solar system sizes to accommodate electrification. There was also general support for revising the RPPP to reflect changing pricing and to support local renewable and DERs projects locally.

The outreach plan (following Council direction) includes direct engagement with stakeholders (listed below) and outreach through appropriate city channels:

- City-Licensed Solar Installers
- Applicants in the solar permitting process
- Current solar customers
- Solar and/or electrical trade associations
- Current RPPP Participants
- Blog post(s), social media, City Talk, Newspaper Articles/Interviews, Sustainability Newsletter



Other initiatives and resources

Other initiatives that City staff is undertaking in support of the City's climate action goals include advanced metering infrastructure, promotion of beneficial building electrification combined with energy efficiency and weatherization, a planned installation of a 5 MW energy storage system at a city-owned substation, and incentive programs that encourage efficiency and electrification in partnership with Platte River and the other three owner communities.

More information about the City's current solar interconnection standards and permitting processes can be found here:

<https://www.longmontcolorado.gov/departments/departments-e-m/longmont-power-communications/electric-service/renewable-energy/solar-energy>

More information about the City's efforts to increase electrification, including energy efficiency improvements, tax credits, and rebates, can be found at

<https://www.longmontcolorado.gov/departments/departments-e-m/longmont-power-communications/electric-service/building-electrification>.

More information about the City's transportation electrification goals can be found in the Carbon Free Transportation Roadmap here:

https://indicators.longmontcolorado.gov/transportation?_gl=1*_zh6oi7*_gcl_au*NTMxNTU4NjU5LjE3MDEzNzE1Mzg.&_ga=2.113365447.1137372412.1708443928-814568227.1681312968

ATTACHMENTS:

None