

# Proposal for Residential Solar and Electric Bike Rebates

April 12, 2022



# Agenda

- 1. Residential Solar Rebate**
- 2. Electric Bike Rebate**
- 3. Discussion and direction**





## Residential Solar and Electric Bike Rebate Framework

The Carbon Neutrality Plan commits to identifying equitable solutions for mitigating and adapting to local climate change threats and reaching carbon neutrality by 2030

Proposed rebates supports the Carbon Neutrality Plan (CNP) in two target areas:

- Clean Energy
- Decreased Dependence on Cars



## Residential Solar Rebate – Why?

- Previous initiatives like Solar United Neighbors Northern Arizona Solar Co-op have demonstrated community interests
  - Over 200 households in Flagstaff, Sedona, and surrounding communities joined to explore affordable solar options
  - 83 are installing a total of 641 kW with the group's selected installer, Rooftop Solar
- The proposed structure builds on prior momentum by providing financial incentives for solar installation and energy production
- Staff and Solar United Neighbors will launch another co-op, coupled with rebates could further reach



## Residential Solar Rebate Framework

- Three scenarios (A, B, C) that vary by
  - Dollars-per-kilowatt rebate (research shows this varies by state from \$100–650/kW)
  - Solar system equipment credit
    - Dollar amount or percentage of solar panel system cost paid to homeowner in the form of a rebate or state tax deduction
- Features an equity component to assist low-income community members
  - Income-based flat rebate to assist with solar system installation costs
  - Research suggests installation cost is the biggest barrier to middle- and low-income families when considering going solar
- Assumes a \$50,000 budget



## Scenario A: Moderate Incentive

All low-income customers		No low-income customers	
\$250/kW maximum	\$1,000	\$250/kW maximum	\$1,000
Income-based flat rebate	\$3,500	Income-based flat rebate	\$0
Maximum rebate/household	\$4,500	Maximum rebate/household	\$1,000
Total incentive budget	\$50,000	Total incentive budget	\$50,000
Total households	<b>11.11</b>	Total households	<b>50</b>



## Scenario B: Aggressive Incentive

All low-income customers		No low-income customers	
\$450/kW maximum	\$3,000	\$450/kW maximum	\$3,000
Income-based flat rebate	\$3,500	Income-based flat rebate	\$0
Maximum rebate/household	\$6,500	Maximum rebate/household	\$3,000
Total incentive budget	\$50,000	Total incentive budget	\$50,000
Total households	<b>7.69</b>	Total households	<b>16.67</b>



## Scenario C: Maximum Incentive

All low-income customers		No low-income customers	
\$650/kW maximum	\$5,000	\$650/kW maximum	\$5,000
Income-based flat rebate	\$3,500	Income-based flat rebate	\$0
Maximum rebate/household	\$8,500	Maximum rebate/household	\$5,000
Total incentive budget	\$50,000	Total incentive budget	\$50,000
Total households	<b>5.88</b>	Total households	<b>10</b>



## Residential Solar Rebate – Future Elements

- Add rebates for additional solar equipment and appliances
  - Fort Collins, Colorado has an additional rebate program for **battery storage**
  - Vermont state and Columbia, Missouri have an additional rebate program for **solar water heaters**
- **Multi-level or tiered rebate** for different categories of kW produced
  - Columbia, Missouri's solar rebate program is structured in **additive rebate tiers** with the total rebate calculated by adding all rebate tiers together
- **Maximize rebate** based on solar panel system capacity
  - Rhode Island's state solar rebate program offers maximum incentive for solar panel systems that produce over 7.7 kW



## E-Bike Rebate – Why?

- Past bike share pilot programs revealed community interest
- City of Flagstaff Sustainable Automotive Rebate Program
  - Offers rebates for locally purchased electric vehicles
- Supports local businesses providing climate aware transportation options
- This e-bike rebate builds on current momentum by providing financial incentives for locally purchased electric bicycles
- **Review annually** for impact analysis and budget or policy changes



# E-Bike Rebate Framework

- Modeled after the City's Sustainable Automotive Sales Tax Rebate Program
- Features an income-based equity component
- Assumes a \$25,000 annual budget

Rebates	Local Purchase
Class 1 and 2 E-bikes	\$250
E-bike Conversion Kits	\$200
Income-Based	For households $\leq 80\%$ of the AMI, there is an additional \$250 incentive available for e-bikes and conversion kits (not to exceed 100% of the cost).



## E-Bike Incentive

All low-income customers		No low-income customers	
Flat rebate/e-bike	\$250	Flat rebate/e-bike	\$250
Additional Income-based Incentive	\$250	Additional Income-based Incentive	\$0
Maximum rebate/customer	\$500	Maximum rebate/customer	\$250
Total rebate program budget	\$25,000	Total rebate program budget	\$25,000
Total e-bikes covered by rebate	<b>50</b>	Total e-bikes covered by rebate	<b>100</b>



## E-Bike E-bike Conversion Kit Incentive

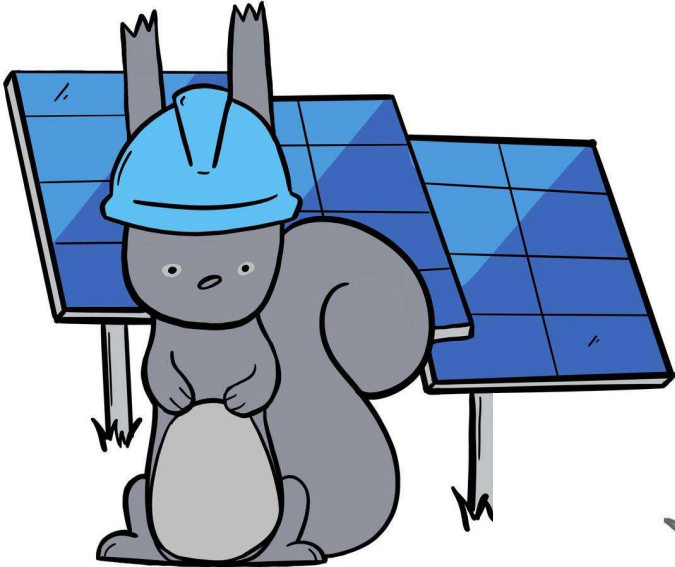
All low-income customers		No low-income customers	
Flat rebate/e-bike conversion kit	\$200	Flat rebate/e-bike conversion kit	\$200
Additional Income-based Incentive	\$250	Additional Income-based Incentive	\$0
Maximum rebate/customer	\$450	Maximum rebate/customer	\$200
Total rebate program budget	\$25,000	Total rebate program budget	\$25,000
Total kits covered by rebate	<b>55.6</b>	Total kits covered by rebate	<b>125</b>



## E-Bike Rebate – Future Elements

- Expand eligibility to **used e-bike purchases** as they become available on the market
- Consider **additional electric-ride vehicles**, such as e-scooters and Segways, for rebate eligibility (Austin, Texas example)
- Includes **bike accessory purchases** (e.g., helmet, lights, rack, lock) within the rebate program (Benton County, Oregon example)
- Expand to provide rebates for **businesses fleet purchases** (e.g., delivery services) looking to electrify their transportation (Austin, Texas example)
- **Review annually** for impact analysis and budget or policy changes

Thank you



**TEAM FLAGSTAFF**  
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