

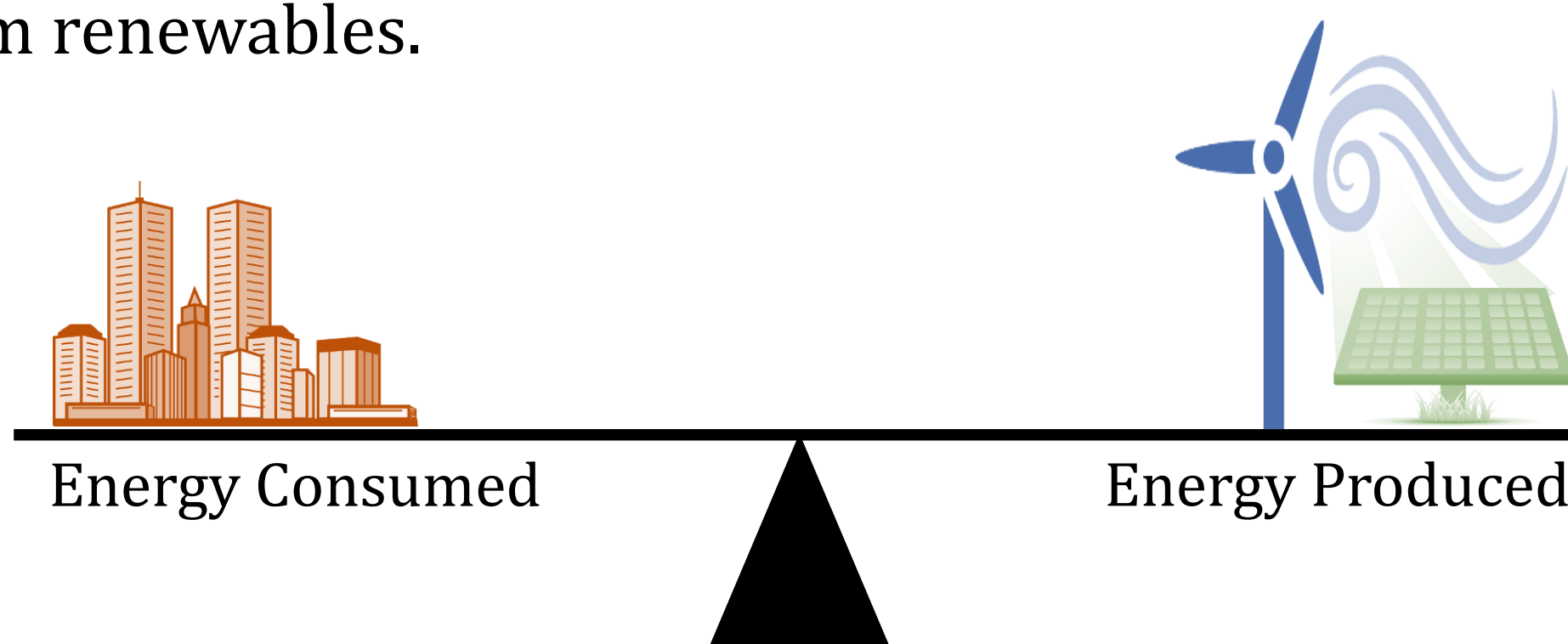
Net Zero Energy Roadmap Implementation

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What does it mean to be a Net Zero Energy City?

Burlington defines a Net Zero Energy (NZE) city as one that reduces its usage while sourcing its entire energy supply from renewables.



Why Net Zero Energy?

Burlington takes pride in being a city that prioritizes environmental stewardship and responsibility. Burlington's commitment to NZE by 2030 reflects the city's culture and values. Achieving NZE will help Burlington to:

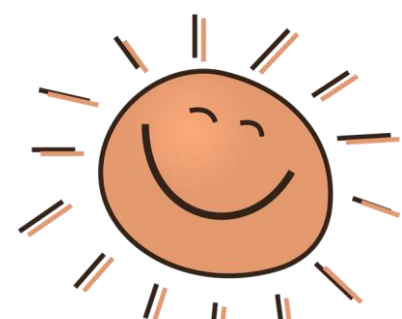
Meet climate goals



Create a healthier, happier, more equitable city through:



Lower utility bills



Comfortable & healthy buildings



Better air quality

Getting to Net Zero Energy

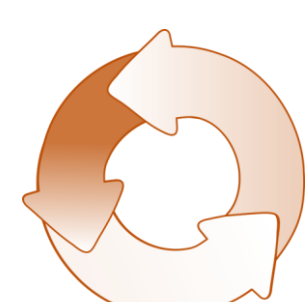
Burlington has a 100% renewable electricity portfolio, In order to achieve NZE, the city must:

Electrify transportation

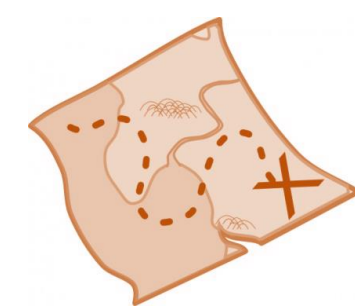
Improve building efficiency

Electrify space & water heating

Implement district energy heating



Roadmap Implementation



Broad strategies



Concrete actions

Results & Recommendations

Gaps in existing programs & proposed new programs



Electric Vehicles

Gap: No charging at multiunit dwellings

New: Subsidize charging infrastructure installation



Space & Water Heating

Gap: No programs for natural gas customers and no incentives for load shifting

New: bill credit or rate + sub-metering and weatherization or smart thermostat



Building Efficiency

Gap: No incentives or financing for retrofits

New: Whole-building incentive packages + financing mechanisms



Rate Design

Gap: Demand charges are a barrier and time of use should be more complex

New: "demand charge holiday" and steeper timer differentials

District energy next steps

New proposal for Vermont Medical Center with additional funding from Legislature

Energy efficiency research: Common themes across cities

- A mix of prescriptive and performance pathways
- Most have several phases
- Require upgrades by a professional
- Technical and financial assistance programs
- Fines for violations

Discussion

1. **Defining Net Zero Energy:** The term is wonky and not intuitive. The City needs to articulate a concrete, universally agreed upon definition for the public
2. **Grid impacts:** Electrification could create a new peak and require new distribution infrastructure. How can Burlington meet this challenge equitably?
3. **Load control and efficiency are key:** Strategic electrification is imperative to mitigate grid impacts
4. **Natural gas:** The electric department needs a mechanism by which to enter the natural gas market
5. **Deep energy retrofits:** Burlington must go beyond weatherization to deep energy retrofits, which will require different financing mechanisms
6. **Equity:** How can Burlington make electric vehicles and other solutions broadly accessible?
7. **Align & prioritize:** Burlington's many steps toward NZE should be aligned. The City should have a unified understanding of its priorities.
8. **The good should not be the enemy of the perfect:** Achieving 90 or even 80 percent Net Zero Energy by 2030 is still a huge success
9. **Control:** Some aspects of achieving this goal are outside of Burlington's control

Next Steps

1. **Communications and customer relations:** Develop a plan for the public release of the Net Zero Energy Roadmap in September
2. **Natural gas customers:** Develop a strategy for assisting natural gas customers who want to electrify. Could require state action
3. **Finance retrofits:** Identify financing mechanisms for upgrades that go beyond weatherization
4. **Meet new demand:** Identify additional renewable resource procurement opportunities to meet increased electricity demand and assess the need to meet new distribution capacity requirements



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