Appendix A: Compiled List of Strategies

These strategies informed the Building(s) for the Future 2021 Summit and continue to inform our work moving forward.

Expand available financing options (can take a variety of forms)

- **Private financial institutions** can offer (or expand their offerings) of financial products for energy efficiency, renewable energy, and electrification efforts.
- **Utilities** can offer on-bill financing or on-bill repayment. In on-bill financing, the utility incurs the cost of the upgrade and it is repaid in monthly installments on the bill. On-bill repayment is the same except that a third-party provides the up-front capital for the improvement.
- **The City of Missoula**, as a charter city, can establish PACE financing where a clean energy improvement is paid for via property taxes. The repayment is attached to the property rather than the individual. **Missoula County** may also be able to establish a similar program tied to property taxes.

1-stop energy shop for residential and commercial properties

Technical assistance will be central to this work. A 1-stop energy shop would centralize incentives and technical assistance to make it as easy as possible to implement energy efficiency measures, and it could also serve as a clearinghouse for lessons learned from flagship projects. 1-stop shops are typically pursued in partnership with the local utility, though Missoula may be able to create a 1-stop shop independently with appropriate funding.

Workforce development

Low carbon subdivisions and new development will likely increase demand for a skilled workforce of energy service companies and contractors who can perform high-quality building audits and retrofits. Missoula will need to pursue partnerships between local energy efficiency businesses, Missoula College, and other relevant stakeholders to develop a robust clean energy workforce, as well as provide training opportunities for those already in the industry. Workforce development programs can and should diversify the clean energy workforce and support the hiring and training of those typically not employed in these jobs.

Expand access to low carbon and high efficiency materials

Building materials are constantly evolving. Flagship projects could be key to promoting new materials and increasing community knowledge of them. This is also an opportunity for supporting local entrepreneurs that focus on the manufacturing and distribution of these materials.
Developer Incentive: Density Bonus

A density bonus provides the opportunity to build more units per acre in exchange for developers meeting the higher-than-code performance standard. Greater density offers co-benefits as well, such as reduction of urban sprawl and vehicle miles traveled. Challenges could include neighborhood resistance to larger development projects or tension with other community objectives that may be interested in leveraging density.\(^1\) Successful implementation would need to consider the size and type of density bonus to offset the higher costs of green-certified construction and ensure that the value of the incentive matched the cost of achieving the higher performance standard.\(^2\) Austin, TX and Seattle, WA both offer density bonuses for green building projects.

Developer Incentive: Reduced Parking Requirements

Minimum parking requirements incur a myriad of direct and indirect environmental detriments, while also increasing the cost of development. By requiring a number of parking spaces attached to both residential and nonresidential developments, cities artificially reduce their density, increase development costs and make their spaces more auto-centric and less pedestrian friendly.\(^3\) On a per-unit basis, parking requirements can add up to $50,000 to development costs and could be a viable incentive for green building projects.\(^4\)

This type of incentive can most readily be applied to multifamily dwelling units, which require between 0.75 and 2.0 parking spaces per dwelling units.\(^5\) Detached single family homes and commercial properties may also be able to be included in such an incentive program. Policy design and training of city zoning officials would represent the sole cost of implementation of such a policy. Co-benefits include an increase in walkability (with its associated environmental and health benefits),\(^6\) and potential challenges may be citizen demand for ample parking spaces. Flagstaff, AZ and Denver, CO both offer this incentive to green building projects.

Developer Incentive: Impact and/or Permit Fees Reduced

Impact and permitting fees can be offered as a financial incentive for developers to use green building practices. Missoula requires developers to pay for impact and permit fees for both residential and non-residential development.\(^7\) This incentive for meeting green building criteria

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\(^1\) The City of Missoula’s *A Place to Call Home* report identifies density bonuses as a potential strategy.
\(^2\) *Green Building Incentive Trends.* American Institute of Architects, n.d.
\(^3\) Michael Lewyn and Kristoffer Jackson. “How Often Do Cities Mandate Smart Growth or Green Building?” Arlington, VA: George Mason University, October 2014.
\(^5\) Title 20, Table 20.60—1 Off-Street Parking Schedule (n.d.).
\(^7\) City of Missoula, MT. “Impact Fees,” n.d.
would have low barriers to program development, and it is currently in place in San Diego, CA and St. Petersburg, FL.

**Developer Incentive: Permit Process Expedited**

Review and permitting processes can often be lengthy, in some municipalities these processes can take up to 18 months. Reducing the duration of the review and permitting process, in exchange for committing to specific green building standards, can result in significant cost savings for the developer. This allows a municipality to offer a significant incentive with little or no financial investment, since it only requires a shift in permitting priority. San Diego, CA currently has a successful expedited permit process program to encourage green building.

**Developer Incentive: Property Tax Abatement**

Missoula could offer developers a period of tax abatement on properties that meet green building criteria. These abatements have the benefit of being flexible on the time period allotted by the city (taxes could be abated for 3, 5, 10 years, etc. depending on program design). This type of green building development incentive is becoming increasingly popular with other municipalities - Cincinnati, OH, Cleveland, OH, Baltimore, MD, and Virginia Beach, VA have successful property tax abatement programs.

**Developer Incentive: TIF Funding Availability**

Tax Increment Financing (TIF) is a method of financing a project or development in a designated geographic area based on the anticipated increase in property tax that will be generated by the project. TIF funding is used to leverage public investment into additional private capital, and could be made available in “zones” to projects that reach certain energy use or emissions criteria. A local government could issue municipal or private bonds to raise capital for a large-scale project that meets these criteria, and use the TIF revenue to service bond payments. Alternatively, a local government could use TIF revenue incrementally—as the revenue is collected—to pay for smaller-scale green infrastructure projects.

TIF programs and districts are allowed for certain uses in Montana, and the state identifies several types of projects for infrastructure development, like bike racks and tree planting, that TIF funding may be used for when procured. The Sawmill District in Missoula used TIF funding for initial development. Additionally, TIFs have received significant criticism and opposition due to the potential of TIF financing to divert property tax revenue from other municipal needs, such as school funding, as well as concerns over displacement and gentrification.

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Energy use disclosure ordinance (benchmarking and transparency)

An energy use disclosure ordinance, or benchmarking and transparency policies, require commercial and/or residential building owners to disclose their building’s energy consumption (typically via Energy Star Portfolio Manager) on an annual basis to local government. The data is then compared to buildings of a similar type and size and then made publicly available. Over the past decade, disclosure ordinances have emerged across the United States as an effective tool to boost energy efficiency in buildings and are seen as a critical first step for data-driven decision making and the creation of stronger market signals. They do not mandate energy efficiency or a certain building performance standard. For more on mandating a performance standard, see “Building energy (or emissions) performance standard” below.

Energy use disclosure ordinances are typically implemented via the passage of a local ordinance and target buildings by size and type. The size cutoff ranges across jurisdictions, though most of Missoula's peer communities apply benchmarking to buildings 25,000 sf and larger. The first step of the ordinance process is a building inventory to understand the size and use of buildings within the jurisdiction, which will help determine the appropriate building size that the program will address. For reference, the Missoula County Courthouse and Annex is 85,000 sf. Disclosure ordinances are often phased over time, and it’s possible to phase them so smaller buildings are required to disclose later in the process, increasing the total number of buildings that fall under the policy.

**~$17 - $46/ MT of CO\textsubscript{2} reduced**

Disclosure ordinances are most effective when paired with an additional policy, such as mandatory retro-commissioning or building energy performance standards (see below).

Building energy (or emissions) performance standards (BEPS)

A building energy (or emissions) performance standard sets energy or emissions standards that larger multifamily and commercial buildings must meet by a certain date. In addition to a long term policy goal, such as 80% energy use intensity reduction by 2035, BEPS include interim goals that must be met along the way (e.g., 38 EUI by 2025, 34 EUI by 2030, 31 by 2035, etc.). Rather than increase education about a building’s energy (via disclosure) or encourage energy efficiency (via an engagement campaign), BEPS require a standard to be met.

13 Ibid.
BEPS are implemented via local ordinance, applying to buildings of certain sizes and types, and they phase in over time, beginning with extensive stakeholder engagement and benchmarking to define appropriate targets. These preliminary steps ensure a performance standard is not unreasonable or unrealistic. Program design should also be paired with resources such as financial incentives, financing, and technical assistance, which will be especially important for affordable housing projects that are required to comply.

Greenhouse gas reductions are a direct reflection of the specific performance standard, so the exact GHG potential for a BEPS in Missoula cannot be determined at this time. However, ACEEE projects that an average BEPS applies to ⅔ of buildings and that 30% energy savings are possible in participating buildings that must comply with these standards.15

A note on legality: The legal relationship between state building codes and a building energy performance standard is murky - while local governments are not explicitly prohibited from establishing a BEPS, Governor Bullock’s Climate Solutions Plan identifies BEPS in mitigation action 2K: *the State, through legislation, should explicitly allow Montana local governments to adopt building performance standards and Montana cities should adopt such standards tailored for their individual circumstances*.16 This strategy suggests it may be legally contested if Missoula pursued it prior to the state legislature taking action to explicitly allow BEPS.

| “$8/MT of CO₂ reduced if ⅔ buildings participate and 30% reduction in each building |

High performance standards for new buildings via zoning

While a BEPS applies to existing buildings, there is also an opportunity to mandate higher performance standards for new buildings via zoning. The City or County could mandate buildings over a certain size adhere to higher performance standards (such as LEED certification or Energy Use Intensity) through amending the zoning code. Currently, the City of Cambridge, MA and Boston, MA mandate efficiency requirements for buildings over 25,000 sf and 50,000 sf, respectively.17

Mandatory retro-commissioning and/or tune-ups of commercial and/or multifamily buildings

Mandatory retro-commissioning (RCx) requires large buildings to perform a prescribed set of operations and maintenance improvements designed to reduce building energy use every 5 years. Rather than require a certain standard be met (like BEPS), retro-commissioning requires a set of actions be taken. RCx programs are also implemented via local ordinance, applying to buildings of certain sizes and types, and they too phase in over time, beginning with union and

trade group engagement and cost studies of retro-commissioning in publicly owned buildings. These steps help ensure that the required actions are not too costly to property owners. Program design should also be paired with a suite of financial incentives and technical support. Studies estimate that mandatory retro-commissioning can achieve whole-building energy savings of \(~15\%\).\(^{18}\)

\[\text{\$27/MT of CO}_2 \text{ reduced if } \frac{2}{3} \text{ buildings participate and 15\% reduction in each building}\]

Voluntary stretch code\(^{19}\)

A stretch code is a code or alternative compliance path that is more aggressive than base code, resulting in buildings that achieve higher energy savings.\(^{20}\) The state of Montana allows localities to adopt voluntary stretch energy building codes, but they cannot require projects to adhere to this higher performance code.\(^{21}\) While it is not legal to require adherence to a stretch code at this time, the Montana Climate Solutions Plan identifies this as a key mitigation strategy.

Regardless of whether they are mandatory or voluntary, stretch codes provide an opportunity to train the building and development communities in advanced practices before the underlying energy code is improved and help accelerate market acceptance and adoption of more stringent energy efficiency codes in the future.\(^{22}\) Depending on the stretch code itself, buildings that adhere to the stretch code could perform 20\% - 40\% better than the base code. Stretch codes are most effective when paired with incentives.

Energy savings competition

An energy savings competition could encourage local businesses, homeowners, and renters to reduce their energy consumption. Program design of such competitions varies greatly, and Missoula would need to engage all relevant stakeholders when identifying the details of a Missoula based competition. Generally speaking, competitions measure the change in participants’ energy use from before the competition to during the competition and provide prizes to winners, utilizing online software to engage participants and track results via a public leaderboard or dashboard.\(^{23}\) Missoula would not be the first Montana community to design an


\(^{19}\) In 2018, the Missoula City Council passed Resolution 8250 to instruct staff to investigate the feasibility of a stretch code and if practical, develop a voluntary, incentive based stretch code for Missoula.

\(^{20}\) "Stretch Codes," New Buildings Institute, n.d..

\(^{21}\) In some states, such as Massachusetts, the state allows local jurisdictions to vote on whether or not they would like to require the stretch code instead of the base code. For more information, see: State of Massachusetts, "Building Energy Code: Summary of State Building Energy Codes Including the Stretch Code."

\(^{22}\) "Stretch Codes," New Buildings Institute, n.d..

energy savings competition: Bozeman, MT hosted the “Energy Smackdown” competition in 2015.  

In a review of energy savings competitions, they were found to achieve, on average, a 5% reduction in electricity usage. If paired with other incentives that could make whole home retrofits possible, energy savings could be much more substantial. Rutland NeighborWorks in Vermont spearheaded a program that allowed 5% of residences to undergo a comprehensive retrofit, which led to 30% savings in each household. For an energy savings competition to be most effective, it needs to be paired with other resources, such as robust customer service: a recent study by Vine and Jones found that competition alone was not sufficient to achieve energy usage reductions. 

**Energy efficiency “bulk buy”**

A bulk buy program is when a local government makes a bulk purchase of high efficiency products (heat pumps, LED light bulbs, etc.) and then provides them to citizens at a below market cost to fill gaps in existing rebate and incentive programs. This could reduce the upfront cost of high efficiency heating and lighting systems for property owners interested in improving the energy efficiency and property value of their assets. Such a purchase could be made in collaboration with other Montana cities to drive down cost and amplify benefits. Ann Arbor, MI recently identified it as a top strategy to meeting their city’s carbon neutrality goal, with an estimated cost of $3.92/MT of CO$_2$ reduced and strong health, economic, and equity co-benefits. 

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~$4/MT of CO$_2$ reduced
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**Eco-District**

Eco-Districts are district-level projects that bring together an area or neighborhood’s stakeholders to design and implement ambitious projects with outcomes in equity, resilience, and climate mitigation. There are currently 11 certified Eco-Districts (Atlanta, Austin, Boston, Denver, Pittsburgh, Portland, Rochester, Santa Monica, Seattle, and Toronto), and they have been shown to lead market transformation by showcasing innovative development projects. The Eco-District

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26 Ibid.  
27 Ibid.  
29 Bozeman has identified “Increase energy efficiency in existing buildings” as a top strategy in their recent climate plan. For more information, see: City of Bozeman, MT, “Bozeman Climate Plan” (City of Bozeman, MT, 2020).  
31 Ibid.
certification provides a unique branding opportunity that would earn recognition across the county. Project level details would be determined by involved stakeholders; if Missoula were to pursue establishing an Eco-District, it would first need to identify an area where substantial new development is occurring and gauge the interest of local property owners. The 2019 Downtown Missoula Master Plan identified establishing an Eco-District as a strategy to consider.32

Flagship projects

In contrast to establishing an Eco-District, flagship projects could be built city and county-wide. Flagship projects may represent a range of “going beyond what’s expected,” such as including a deconstruction plan, going all-electric, reducing embodied carbon, or lowering energy use intensity from a business as usual building. Ideally, these projects would coincide with buildings that are already high profile in Missoula, such as the renovation of the old public library or the federal building. A recognition process would be critical to supporting flagship projects and could be recognized through a variety of methods, such as an online “story map”, recognition placards, or a building tour (online or in person).33 The marketing campaign can serve multiple purposes, including community education, virtue signaling that this is a priority for Missoula, and recognition of project partners.

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33 For an example of an online story map, see Climate Smart Missoula’s Energy Stories.
37 Ibid.
most effective, it needs to be paired with other resources, such as robust customer service: a recent study by Vine and Jones found that competition alone was not sufficient to achieve energy usage reductions.  

**Home energy disclosure at time of purchase or rent (energy use label)**

Energy bills are a significant household expense, and yet prospective homebuyers and renters are typically unable to factor this information into their decision making. Unless a prospective buyer specifically requests utility data, it is rarely provided. Requiring all units to include an energy use label at time of sale would allow homebuyers to make better informed decisions. A home energy label provides information about a property's energy consumption and costs, plus recommendations for cost-effective energy saving improvements. While there are several rating systems available, the Department of Energy’s Home Energy Score has become popular because of its simplified approach that makes it easy for home buyers and sellers to make comparisons across properties. Bozeman has identified this as a strategy in their most recent climate action plan, and they cite the Department of Energy’s Better Buildings Initiative’s research that energy efficient certified homes sell faster and for 4 to 6% more. While initial results from home energy disclosure policies in Portland, OR, Berkeley, CA, and Santa FE, NM are promising, more data is needed to assess the energy reductions that come with home energy disclosure and labeling.

**Residential energy conservation ordinance**

A residential energy conservation ordinance (RECO) requires prospective sellers or buyers to perform a set of energy efficiency improvements, many of which would be low-cost improvements. Ideally, a RECO is paired with technical assistance and rebate programs to reduce costs for the homeowner. These ordinances could result in 10 - 20% energy savings for the average home, but savings will vary based upon required measures. It may increase the listing price for the home, though this may be offset by the lower utility bills for the life of the house. Burlington, VT, San Francisco, CA, and Berkeley, CA each have adopted a RECO.

**Retrofit assistance program**

A retrofit assistance program would be a new local government program for homeowners that provides grants or low-interest rate loans to perform energy efficiency upgrades. Size and terms

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38 Ibid.
39 City of Bozeman, MT, “Bozeman Climate Plan” (City of Bozeman, MT, 2020).
41 City of Bozeman, MT, “Bozeman Climate Plan” (City of Bozeman, MT, 2020).
44 Ibid.
of the grants or loans would be determined at a later stage, though existing programs in Boulder, CO, Minneapolis, MN, Milwaukee, WI, Dallas, TX and Chicago, IL focus on both the health and safety upgrades that are needed before energy efficiency upgrades are possible, as well as the energy efficiency upgrades themselves. They also often include no-sell or affordability covenants for those accepting the funds in order to preserve existing affordable housing. Programs should be designed in tandem with, and promoted to, low-income residents who are unable to access traditional financing for efficiency projects. Funding for such a program could come from a variety of sources, such as Community Development Block Grants (CDBG), HOME Investment Partnerships Program (HOME), Affordable Housing Trust Fund, or other local funds. ACEEE estimates 20 - 25% residential energy savings can result from this type of program, and it is especially impactful for improving the health, comfort, and safety of marginalized residents.45

**Rental certification program with energy efficiency requirements**

A rental certification program would attach energy efficiency requirements to the process of acquiring or renewing a rental property owner’s certificate of occupancy or business license (such a registry program does not currently exist in Missoula.) The certification program requires local government to establish a rental property registry, and all rental properties must meet a minimum energy efficiency rate or perform a prescriptive list of actions before receiving a rental license. With financial incentives, technical assistance, and flexible compliance pathways, a rental certification program can mitigate increases in rent that may come with property improvements. The city of Bozeman identified this as a top strategy in their recent climate action plan, and Boulder, CO and Ann Arbor, MI currently have successful programs in place. According to ACEEE, 10 - 30% energy savings are possible across rental properties.46 It may not necessarily save renters money if the cost of the improvement is passed on to them as a rent increase, though it would result in reduced monthly utility bills as well as improved comfort inside of the home.

**Renewable energy for renters**

Increasing renters’ access to clean energy can be accomplished via Missoula’s 100% clean electricity efforts, specifically:

- **Solar-ease expansion.** Solar-ease is the community campaign to encourage residents and businesses to go solar. It has so far not focused on landlords and tenants, though this could be an opportunity for expansion of existing outreach efforts. Because the landlord would incur the initial capital costs and the benefits would be reaped by the tenants through lower utility bills, a green lease (a lease that helps align tenant and landlord interests for investments in energy efficiency) would likely need to be developed in order to better share costs between the landlord and tenant.

• **Green Tariff.** A green tariff is a mechanism that has been used in a number of other states with regulated utility markets (like Montana’s) to meet customers’ demands for new renewable energy on a large scale. It’s important to note that in utility jargon, the word “tariff” does not mean “tax,” it simply refers to a rate that customers pay for electricity. NorthWestern Energy is currently working with stakeholders, including Missoula City and County, to develop a green tariff that will (if successful) result in the development of new large-scale renewable energy systems in the state of Montana that NorthWestern customers will have the option of buying into through their utility bills.

**Utility owned community solar.** The City, County, and NorthWestern Energy have been discussing the possibility of developing a solar project in the Missoula area that would be available for any NorthWestern customer in Missoula County to buy into. The rate structure would be similar to the green tariff (above).