

Breakout Session on High Performance BUILDINGS

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| <p>Vision & Long-Term Goals:</p> <p>New Buildings</p> <ul style="list-style-type: none"> • Net Zero Building Construction • Solar ready and EV ready building construction <p>Retrofits</p> <ul style="list-style-type: none"> • Weatherize & improve HVAC in single family, multi family, business <p>Reduce use of natural gas</p> <ul style="list-style-type: none"> • Beneficial electrification of buildings • Benefit from time of use rates for electricity • Possibility of 1/3 hydrogen in natural gas supply (generated off peak @ Nuclear plants) | <p>Action Benefits:</p> <ul style="list-style-type: none"> • GHG Emissions Reduction – climate stability • Energy & cost savings for building owners & tenants • Climate Resilience, Increased comfort • Economic Development |
|---|--|

High Impact Actions

Existing buildings - Energy Efficiency Improvements – city, commercial, multi-family

| Action #1 | | |
|--|--|---|
| Adopt an Energy Benchmarking ordinance See Page | | |
| <p>Examples: B3 (Cities) & Commercial/Multifamily</p> <p>Purpose: Owners know building energy score & invest in efficiency</p> <p>Cities Working on it: Mpls, Edina, SLP</p> <p>Resources: Hennepin Co. Energy Benchmarking Collaborative (with CEE)</p> | <p>Discussion Notes: Questions, Challenges, Needs</p> | <p>Next Steps: Interested Cities & Leaders</p> |

| Action #2 | | |
|--|--|---|
| Commercial and Multifamily Engagement Campaigns See Page | | |
| <p>Examples: PACE Cost share grants Energy Assessments</p> <p>Purpose: Implementation</p> <p>Cities Working on it: Mpls, Edina, SLP, Bloom</p> <p>Resources: CEE, Mpls</p> | <p>Discussion Notes: Questions, Challenges, Needs</p> | <p>Next Steps: Interested Cities & Leaders</p> |

New Construction for Net Zero Buildings – City Owned, Commercial, Multi-Family, Single Family

| Action #3 | | |
|--|------------------------------|-----------------------------|
| Adopt a Sustainable Building Policy (covering projects your city is investing in) See Page | | |
| Examples: | Discussion Notes: | Next Steps: |
| St. Paul's Policy (10 yrs) MPLS policy (in 2020) | Questions, Challenges, Needs | Interested Cities & Leaders |
| Purpose: | | |
| Cities Working on it: St. Paul, Minneapolis | | |
| Resources: St. Paul, Mpls, CSBR | | |

| Action #4 | | |
|---|------------------------------|-----------------------------|
| Educating Developers on Xcel's design assistance, PACE for new construction, Example Projects | | |
| Examples: | Discussion Notes: | Next Steps: |
| Purpose: Impact current developments | Questions, Challenges, Needs | Interested Cities & Leaders |
| Cities Working on it: Edina, Minneapolis | | |
| Resources: CSBR, St. Paul Port Authority | | |

| Action #5 | | |
|---|------------------------------|-----------------------------|
| Support Legislation &/or State Policy Improvements to require better energy performance | | |
| Examples: | Discussion Notes: | Next Steps: |
| Legislation - Optional High Performance Building Standard – Cities Can Adopt | Questions, Challenges, Needs | Interested Cities & Leaders |
| Update Statewide Building Code sooner | | |
| Purpose: Improve new building construction | | |
| Cities Working on it: Mpls, St. Paul, Edina, SLP, Bloomington, | | |
| Resources: SLP, Mpls, Edina, CEE, Fresh Energy | | |

Community Wide Energy Retrofits with existing homes, apartments & businesses

| Action #6 | | |
|---|--|---|
| Add required Energy evaluation in Truth in Sale of Housing (& Renting) Inspections | | |
| Examples: Minneapolis Policy gives prioritized list of actions to take Zero interest home weatherization loans HES contractor bids Purpose: Support sellers & buyers to invest in energy improvements Cities Working on it: MPLS Resources: CEE, MPLS | Discussion Notes: Questions, Challenges, Needs | Next Steps: Interested Cities & Leaders |
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| Action #7 | | |
|--|--|---|
| Comment at the MN PUC to Improve Utility Conservation Improvement Programs (CIP) | | |
| Examples: Multifamily EE program Inclusive Financing Purpose: Increase equity and impacts Cities Working on it: Minneapolis Resources: CEE, MN CUB | Discussion Notes: Questions, Challenges, Needs | Next Steps: Interested Cities & Leaders |
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Success Measures

| Success Indicators | Past Paradigm | New Paradigm |
|---|---|---|
| Met Council (June 2020) <ul style="list-style-type: none"> - City wide natural gas use - Number of new net zero buildings - Weatherization - # of homes, apartments, businesses - Reducing number of energy burdened households | <ul style="list-style-type: none"> - Low Cost Building Construction - Split incentive between builder and building operator | <ul style="list-style-type: none"> - Net Zero Building Construction - Solar & EV ready - MN SB 2030 standards - Construction with better building envelope & HVAC – via rebates, PACE, etc. - Lower energy costs for tenants, building users - District Heating/Cooling - Electrification of buildings |

Equity – What are our opportunities & risks? How do we address them?

Next Steps

| Possible Ways Our Cities Could Work Together | |
|--|---|
| Ways Hennepin County & Met Council can help cities | Ways State Agencies & NGOs can help cities |
| State Policy Changes that would help cities | Ways cities can collaborate toward their energy supply goals? |
| <p>Who's interested in meeting up again to further explore ways our cities can collaborate to make progress on this area?</p> <p>Names/Cities:</p> | |

Contacts Breakout Session Co-Facilitators

Tim Sandry, Chair, Bloomington Sustainability Commission, 952-303-9760 tmsandry@gmail.com

Nicole Ciulla St. Louis Park Environmental Commission Member 715 507-6064 ciull002@umn.edu

Leah Hiniker, Energy Manager, Hennepin County Facility Services 612-543-1219 leah.hiniker@hennepin.us

Ben Rabe Fresh Energy 651 726 7574 rabe@fresh-energy.org

Sean Gosiewski, AforS/ RCCC 612 250-0389 sean@afors.org

Resilient Cities and Communities Coalition

Collaborating to achieve (and live) a resilient future www.afors.org/resilientcities



**Alliance for
Sustainability**

Ecologically sound,
economically viable,
socially just and humane

Sean Gosiewski,
Executive Director,
Alliance for Sustainability,
612-250-0389 sean@afors.org

High Performance BUILDINGS Resources

Resource People

Leah Hiniker, Energy Manager, Hennepin County Facility Services, 612-543-1219

leah.hiniker@hennepin.us

Ben Rabe, Fresh Energy 651 726 7574 rabe@fresh-energy.org

Megan Hoye - Center for Energy and Environment 612-244-241 mhoye@mncee.org

Richard Graves CSBR U of MN (651) 605-5450 rmgraves@umn.edu <http://www.csbr.umn.edu/>

Kurt Schultz, St. Paul, PED, Sustainable Building Policies 651 266-6590 kurt.schultz@ci.stpaul.mn.us

Brian Hoffman, St. Louis Park, Building and Energy Director:952.924.2584 bhoffman@stlouispark.org.

Existing buildings - Energy Efficiency Improvements – city, commercial, multi-family

Action #1 Adopt an Energy Benchmarking ordinance

Purpose: Inform building owners & managers of their building energy scores to motivate them to invest in energy efficiency.

Examples:

- **City Buildings** B3 Benchmarking <https://mn.b3benchmarking.com/>
- **Commercial/Multifamily** Energy Star Portfolio Manager www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager

Resources

Hennepin Co. Efficient Buildings Collaborative with Minneapolis, Edina, SLP (more cities can join!

This collaborative provides cities with the platform and resources needed to make it easier to adopt and implement building benchmarking policies. GPI and Center for Energy and Environment (CEE) are partnering with Hennepin County to support a group of cities through the policy development and stakeholder engagement process. This program is available to cities statewide.

www.hennepin.us/your-government/projects-initiatives/efficient-buildings-collaborative

- Leah Hiniker, Energy Manager, Hennepin County 612-543-1219 leah.hiniker@hennepin.us

Action #2 - Commercial and Multifamily Engagement Campaigns

Purpose: Support owners of larger commercial and multifamily properties to implement energy efficiency improvements

Examples

- **Partners in Energy** Lake Street Energy Challenge, Edina, Eden Prairie, St. Louis Park, Bloomington, Maplewood, St. Paul, Faribault, Northfield, https://www.xcelenergy.com/working_with_us/municipalities/partners_in_energy
- **St. Louis Park St- Roadmap to Achieve Carbon Neutrality by 2040** Emily Ziring, Sustainability Coordinator, 952-924-2191 EZiring@stlouispark.org www.betterenergy.org/blog/minnesotas-st-louis-park-creates-ambitious-roadmap-achieve-carbon-neutrality-2040/
- **Minneapolis Green Business Cost share grants** – Luke Hollenlamp 673-2349 luke.hollenkamp@minneapolismn.gov www.minneapolismn.gov/environment/greencostshare
- **MinnPACE** financing for commercial energy improvements <https://www.minnpace.com>
- **Utility Multi Family Programs** <https://www.cleanenergyresourceteams.org/multifamily-efficiency-programs-benefit-building-owners-and-tenants>
- **Energy Smart - helps businesses become more energy efficient.** www.mnchamber.com/your-opportunity/energy-smart
- **Twin Cities Small Business Energy Initiative (GPI)** www.betterenergy.org/blog/opportunities-to-increase-small-business-engagement-on-energy/

New Construction for Net Zero Buildings – City Owned, Commercial, Multi-Family, Single Family

Action #3 - Adopt a Sustainable Building Policy (covering projects your city is investing in)

Examples & Resources

U of MN Center for Sustainable Building Research <http://www.csbr.umn.edu/>

City of Minneapolis – Sustainable Building Policy is being developed in 2020 building upon St. Paul's policy while adding specific requirements for

- **City Buildings**
- **Commercial**
- **Multi-family** – private and nonprofit
- **Single Family** (Passive House standard)
<http://minneapolismn.gov/sustainability/buildings-energy/WCMSP-215225>
- **Contact:** Luke Hollenkamp Sustainability Program Coordinator 673-2349
luke.hollenkamp@minneapolismn.gov www.ci.minneapolis.mn.us/sustainability/index.htm
- **Minneapolis declares climate emergency, plans sustainable building policy** *City needs to double down on its greenhouse gas reductions, officials said.* Star Tribune DECE 2, 2019 By Miguel Otárola <http://www.startribune.com/minneapolis-declares-climate-emergency-announces-sustainable-housing-policy/565709652/>
- **Green Building Options Checklist** www.minneapolismn.gov/mdr/greenbuilding/index.htm

City of St. Paul – Sustainable Building Policies

- **Contact:** Kurt Schultz, City of St. Paul, PED, 651 266-6590 kurt.schultz@ci.stpaul.mn.us
<https://www.stpaul.gov/departments/planning-economic-development/economic-development/sustainable-building-policy>
 - The City of Saint Paul and the Saint Paul Housing and Redevelopment Authority adopted [sustainable development policies](#) for public and privately developed buildings receiving more than \$200,000 in public financing.
 - [Download the guidebook](#) on building sustainably.
 - Adopted sustainability policies for: [New municipal and HRA owned buildings](#)
[Private Development receiving more than \\$200,000 in public financing](#)
 - *City staff are available to assist developers who are required to follow the policy and any other developers interested in building sustainably. For projects that are not required to comply with either of the above two policies, the Saint Paul PED/HRA [Sustainability Initiative](#) will apply.*

Action #4 - Educate & Engage Developers to build high performance new multifamily and commercial building using existing incentives

Examples/Resources

St. Paul Port Authority – energy efficient & Net Zero commercial building construction

- **Monte Hillman** St Paul Port Authority (651) 204-6237 mmh@sppa.com
- **Net Zero Prototype** <https://www.sppa.com/net-zero-prototype-unveiled>
- **October 2019 Workshop Video** Understanding Net Zero in the Commercial Real Estate Sector
<https://www.youtube.com/watch?v=GKbQymjzLb4&list=UU40XglUFrbEIr3l-9kqrVDQ&index=20>

MN ULI – Re-Development Ready Guide <https://minnesota.uli.org/get-involved/advisory-services/best-practice-resources/redevelopment-ready-guide-2/>

Xcel – Energy Design Assistance (EDA) during project design, review of architectural plans - Maximize the saving opportunities in your construction designs by receiving free, comprehensive services to identify energy and cost-saving strategies for your new construction or major renovation projects www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/new_construction_and_whole_building/energy_design_assistance

City of Edina - proactively working with developers on affordable housing – **Contact** Stephanie Hawkinson Affordable Housing Development Manager 952-833-9578 shawkinson@edinamn.gov <https://www.edinamn.gov/624/Affordable-Housing>

- **City of Edina Updated Policy on New Multifamily Housing** <http://www.edinamn.gov/DocumentCenter/View/6195/Policy-on-New-Multi-family-Affordable-Housing-PDF>

Saint Paul Port Authority <https://www.sppa.com/energy-financing/minnpace>

MinnPACE - Now available for new construction projects to access 20% of the future value of the property up front to invest in improved HVAC and building envelope, to be paid off by the building owner over 10 years based on the energy savings. (based on bank approval) **Contact** Michael Linder at 651-204-6236 or mjl@sppa.com <https://www.minnpace.com/>



Since 2010, commercial building owners across the state of Minnesota have leveraged MinnPACE to finance energy efficiency upgrades and renewable energy investments for existing commercial buildings. Borrowers benefit from 100 percent financing, payments rolled into a special tax assessment, and no payments due until the following calendar year.

Unfortunately, state law made it challenging to use MinnPACE for new construction projects. In 2018, 70 percent of commercial PACE loans nationwide were tied to new construction. These success rates can be attributed to businesses having access to 20 percent of their appraised value. Minnesotans, on the other hand, were limited to 20 percent of the assessed value, which is a much smaller number.

In 2019, Minnesota law was amended. Going forward, commercial property owners can now add MinnPACE to the capital stack for new construction, up to 20 percent of the appraised value, contingent on their mortgage lender's approval.

QUALIFYING INVESTMENTS

- ✓ Investments must be cost-effective energy improvements that reduce energy consumption without altering the energy source.
- ✓ Equipment must be permanently affixed to the property.
- ✓ Energy savings must exceed the cost of equipment and installation within 20 years or less (per an energy audit).
- ✓ Solar installations and equipment to charge electrical cars also qualify.

FINANCE TERMS

- ✓ Maximum term is 20-years or the useful life of the equipment (whichever is less)
- ✓ The principal amount cannot exceed the cost of equipment and installation (including labor, energy audits, or renewable energy feasibility studies).

Action #5 - Support Legislation &/or State Policy Improvements to require better energy performance

Purpose: Improve new building construction

Cities working on it: SLP, MPLS, Edina, Eden Prairie, Bloomington, Rochester, etc.

- Kurt Schultz, St. Paul, PED, Sustainable Buildings 651 266-6590 kurt.schultz@ci.stpaul.mn.us
- Brian Hoffman, SLP, Building and Energy Director: 952.924.2584 bhoffman@stlouispark.org
- Stacy Miller, Energy Policy, City of Minneapolis 612 673-3110 stacy.miller@minneapolismn.gov

Technical Resource People

- Justin Fay Policy Director, Fresh Energy 651 294 7147 fay@fresh-energy.org
- Ben Rabe, Fresh Energy 651 726 7574 rabe@fresh-energy.org
- Megan Hoyer - Center for Energy and Environment 612-244-241 mhoyer@mncee.org
- Richard Graves CSBR U of MN (651) 605-5450 rmgraves@umn.edu <http://www.csbr.umn.edu/>

Pathways to Advancing Energy Standards in New Commercial Buildings:

Option 1 - New Legislation - Optional Advanced Performance Building Standard MN Cities Can Adopt –

- <https://www.pca.state.mn.us/sites/default/files/tdr-fg15-01.pdf>

Option 2 - Update MN Statewide Building Energy Code sooner

- <https://www.energycodes.gov/adoption/states/minnesota>

Resources in development We would like to learn about your city's interest in joining our efforts to allow local jurisdictions to pursue a higher energy standard for commercial and multifamily buildings. Moreover, we would like to work with you to learn what would be helpful for promoting this effort internally. Please note that we will be distributing the items below to cities in the coming weeks.

- Sample resolution in support of allowing cities the option to adopt an advanced commercial and multifamily energy standard
- Key talking points to help explain our initiative to internal and external colleagues
- A conference call for city leadership and government affairs staff to offer an overview of the effort and provide an opportunity for feedback, coordination, and questions.

Next Steps - State-Led Stakeholder Process We think it is important for you to know that cities are not working alone on this effort. Governor Tim Walz has directed Commerce Commissioner Steve Kelley and Labor & Industry Commissioner Nancy Leppink to convene a broader stakeholder workgroup to discuss how to assist cities in their efforts to reduce emissions from new and renovated buildings. A voluntary advanced energy standard for buildings is central to their discussion. At the conclusion of their five-meeting process, a report will be drafted and presented to the Governor for consideration. Cities are represented in this process by Craig Johnson with the League of Minnesota Cities, Brian Hoffman (Saint Louis Park), and Kurt Schultz (Saint Paul). We will keep you posted on developments.

Keeping in communication in 2020 - We will continue to communicate about this effort into the 2020 session as needed. Feel free to request that we add or remove names from this distribution list by replying to this email. Thank you for your interest in improving energy efficiency and resilience in commercial and multifamily buildings! Please feel free to contact anyone on the planning team with your thoughts or questions.

Stacy Miller on behalf of the Planning Team, Ellen Biales, Bloomington, Tara Brown, Edina, Kevin Bright, Rochester, Brian Hoffman, Saint Louis Park, Kurt Schultz, Saint Paul

Community Wide Energy Retrofits with existing homes, apartments & businesses

Action #6 - Add required Energy evaluation in Truth in Sale of Housing (& Renting) Inspections

Purpose: Support sellers & buyers to invest in energy improvements

Example

City of Minneapolis Truth in Sale of Housing (TISH) Energy Disclosure Report Requirement

http://www.minneapolismn.gov/ccs/ccs_tish

Contact Luke Hollenkamp 673-2349 luke.hollenkamp@minneapolismn.gov

As of January 15, 2020, Truth in Housing evaluators have begun collecting additional information on the energy efficiency of a home. This data will be used to create an Energy Disclosure Report which is located at the end of the full Truth in Housing report. The goal of this new initiative, passed in ordinance by the City Council in February 2019, is to provide homeowners and prospective buyers with the general energy performance of a home. The report will also give recommendations on what could be done to improve the energy efficiency.

A **energy score of 0-100** will be generated from the **following 4 key areas** looked at for the **energy disclosure report: (1) Attic Insulation, (2) Wall Insulation (3) Single Pane Windows without Storms (4) Heating System** Unlike the rest of the Truth in Housing report, there will be no required repairs related to the energy disclosure report. **Frequently Asked Questions**

<http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/wcmssp-222012.pdf>

Minneapolis - Zero interest home weatherization loans (with MN CEE) with the interest rate brought down through funds provided by the clean energy franchise fee

City of Minneapolis 2018 Franchise Fee Increase for Climate and Energy Action

<http://www.minneapolismn.gov/www/groups/public/@citycoordinator/documents/webcontent/wcmssp-206063.pdf>

2.8 Million from the clean energy franchise fee annual revenues to maintain (not decrease) important climate programming including

- Green cost share grants for businesses
- Low cost home energy audits and
- Zero interest home weatherization loans
- Green work force development and an inclusive financing pilot project.

Minneapolis Utility Franchise Agreements www.minneapolismn.gov/energyfranchise/index.htm

Home Energy Squad enhanced visits www.mncee.org/solutions/homes/home-energy-squad-enhanced/

- **Contact:** Stacy Boots Camp. Residential Program Outreach & Recruitment Coordinator. 612-244-2429 sbootscamp@mncee.org
- CEE HES staff provide
 - o qualified bids from approved contractors to do the work
 - o Access to low cost financing from CEE

Action #7 - Comment at the MN PUC to Improve Utility Conservation Improvement Programs (CIP)

- Especially to improve multi-family residential programs and low income access.

Resources <https://www.mncee.org/policy/minnesota-energy-dockets/>

- **City of Minneapolis** Stacy Miller, 612 673-3110 stacy.miller@minneapolismn.gov
- **Center for Energy and Environment** Mike Bull. Director of Policy (612) 335-5858 mbull@mncee.org
- **MCEA** Carolyn Berninger Climate & Energy Policy (651) 287-4878 cberninger@mncenter.org
www.mncenter.org
- **City of Minneapolis – Inclusive (On Bill) Financing Study**
<https://energytransition.umn.edu/projects/inclusive-finance-for-residential-efficiency/>

5 High-Impact **Buildings Policy Options** for Low-Carbon Cities

<https://greenstep.pca.state.mn.us/page/ordinances>

Please send your suggestions and additions to

Phil Muessig, MPCA, MN Greenstep Cities Coordinator, 651-757-2594, Philipp.muessig@state.mn.us

Building Policy Options

- ❖ For existing buildings
 - [Use the State's B3](#) public building benchmarking tool to target energy-efficiency improvements {1.1}
 - [Require commercial building energy benchmarking](#) (using Hennepin Co. registry) to incentivize energy- efficiency improvements averaging 1.7% per year {2.3}
 - [Require Truth-in-Housing](#) residential reporting to incentivize and better price more energy-efficient housing {2.3}
 - [Dedicate residential/commercial improvement](#) funding for energy efficiency and renewables {2.6}

- ❖ For new buildings
 - [Require the Sustainable Buildings 2030](#) state energy standard for city, and/or commercial/industrial, and/or residential properties that {3.3}
 - receive city financial support, and/or
 - require city regulatory approval (planned unit developments, conditional use permits, rezonings, variances)

Options selected from a review of:

- *Best Practice Actions and City Action Reports* (MN GreenStep Cities program: 2019) at <https://greenstep.pca.state.mn.us>
- *Climate Solutions and Economic Opportunities* (MN Environmental Quality Board: 2017) at <https://www.eqb.state.mn.us/content/climate-change>
- *High Impact Practices* (Urban Sustainability Directors Network: 2019) at <https://www.usdn.org/public/page/6/Projects>
- *Drawdown Solutions* (Project Drawdown: 2017) at <https://www.drawdown.org/solutions-summary-by-rank>

Efficient Buildings Collaborative

Hennepin County has developed a program that creates a standardized process for cities to adopt and implement building energy benchmarking and disclosure policies.

Energy benchmarking and disclosure policies require certain buildings to keep track of and report on their energy consumption. Buildings, especially large commercial or multi-tenant residential buildings, comprise 40% of gross regional energy use. Benchmarking energy consumption of such buildings therefore creates an opportunity to identify conservation opportunities and reduce a city's energy consumption.

National statistics show that of the buildings that have benchmarked their energy use for 3-years save on average 7% in annual energy use. Over 50% of energy reduction opportunities are low to no-cost to the building owner. Awareness of building energy use is the first step.

The Energy Buildings Collaborative is available to all Minnesota cities. The peer network will occur from May 2019 through May 2020.

Benefits

- Save money on utilities by reducing energy and water use
- Reduce greenhouse gas emissions and preserve the environment
- Promote energy efficient buildings
- Streamline and standardize the energy benchmarking process
- Maximize local energy efficiency programs

Contacts

Facility Services

Leah Hiniker

Energy Manager

Office: 612-543-1219

leah.hiniker@hennepin.us

Background

Cities across the country have passed energy benchmarking and disclosure policies. Here in Hennepin County, the City of Minneapolis currently requires all large commercial buildings to benchmark energy and water consumption and report usage annually to the city’s property information page.

Through a competitive request for proposals, Overlay Consulting was chosen by Hennepin County to provide program implementation services to cities at an economical rate in a standardized process. This contract will allow cities to easily adopt an energy building benchmarking and disclosure policy, helping cities to eliminate the burden of developing their own program

The Program

Hennepin County wants to create a standardized process for cities in the county to adopt an energy benchmarking and disclosure policy. The ordinance text itself will need to be adapted to the specific needs of a city, but there would be certain standardized features for all Hennepin County cities, including:

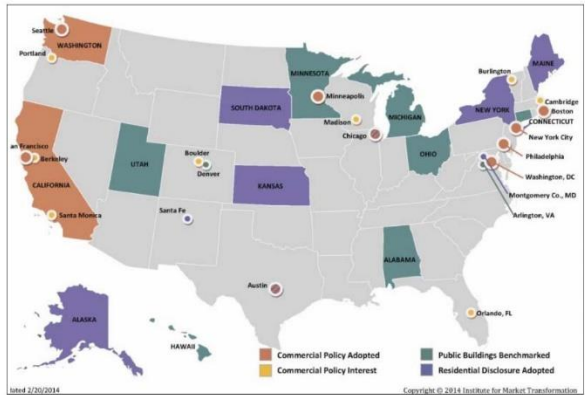


Figure 1. Energy disclosure policies in the United States

1. Disclosure deadlines;
2. Educational resource and helplines;
3. Energy data will be vetted through Overlay;
4. Energy data will be posted on the Hennepin County website.

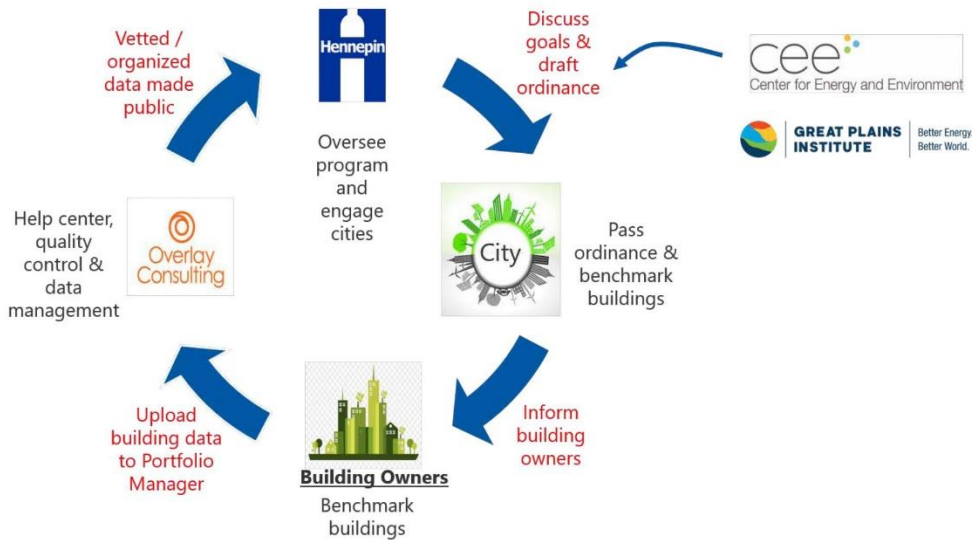


Figure 2. Outline of policy adoption process

