2025
Climate
Action
Framework

Draft action steps

Share your feedback on climate solutions that will be included in Minnesota's 2025 Climate Action Framework.

mn MINNESOTA

2025 CLIMATE ACTION FRAMEWORK – DRAFT ACTION STEPS

Share your feedback on climate solutions that will be included in Minnesota's 2025 Climate Action Framework.

Updating our framework

In 2022, Minnesota released our Climate Action Framework — a vision for how our state will address and prepare for climate change. Over the last three years, we've made significant progress on climate action. Billions of dollars in state and federal funding have advanced dozens of programs to cut climate pollution and prepare our state for a warmer, wetter Minnesota.

Minnesota is updating our Climate Action Framework in 2025 to include a more comprehensive set of actions with a stronger focus on collaboration, community benefits, and workforce needs. Though we have made progress, we must accelerate the pace and scale of our climate actions to achieve our long-term vision of a carbon-neutral, resilient, and equitable future.

Minnesota state government wants to hear how climate change is impacting your community and the actions you'd like to see included in the 2025 Climate Action Framework. Share your feedback on the draft action steps included in this document by following the instructions below.

As part of the 2025 Climate Action Framework update process, we called for public feedback on the state's *Ideas for Climate Action* document in January. This document included specific initiatives and subinitiatives for each of the framework goals. We received over 200 public comments through our online engagement platform and hosted conversations with hundreds of Minnesotans to discuss their feedback. Those comments were all reviewed, organized by chapter, and shared with the groups updating the framework. Some of those comments helped to inform the 2025 action steps included here.

What are the draft action steps?

This document includes draft action steps for the 2025 Climate Action Framework. These steps identify key actions Minnesotans can take to achieve the vision of our framework – a carbon-neutral, resilient, and equitable future for Minnesota. Some of these actions were included in the 2022 framework and expand on work state agencies are doing. Others are new to the 2025 framework and reflect progress made on our original goals.

Understanding the tables:

- The tables are organized by the goals outlined in each framework chapter.
- Initiatives describe areas of action, with subinitiatives further specifying areas of work.

Share your feedback

The state wants your input on the future of climate action in Minnesota. The 2025 Climate Action Framework project team will review your input and consider your perspective as the new framework is developed.

Here's how you can help:

1. Review the draft action steps included in this document.
2. Have comments? Share your input by visiting our online engagement platform to complete the survey (https://engage.eqb.state.mn.us/climate-action-framework-update). Please reference the specific action step by its number.

Goal 1 – Clean transportation

Connect and serve all people through a safe, equitable, and sustainable transportation system

Initiative 1.1: Travel options

Maintain and improve multimodal transportation connections to improve mobility and reduce emissions

Sub-initiative	State action steps
1.1.1 Design, implement, and maintain infrastructure network improvements for walking, rolling, and bicycling	1.1.1.1 Scope transportation projects, including projects in Greater Minnesota, to include facilities for people walking, bicycling, rolling, and taking transit.
	1.1.1.2 Evaluate current funding priorities and direct more resources towards non-motorized transportation to support improved pedestrian and bicycle facilities that are safe, attractive, and accessible for all people.
	1.1.1.3 Deploy projects that temporarily demonstrate improvements for people walking and bicycling to assess opportunities for permanent improvements.
	1.1.1.4 Provide cost-sharing opportunities for developers, employers, and communities to include spaces for people to walk.
	1.1.1.5 Develop resources, guidance, and technical assistance for partners (e.g., elected officials, engineers, community advocates) to support integration of a Complete Streets approach into transportation projects.
	1.1.1.6 Accelerate the enhancement of pedestrian and bicycle networks aligned to state bike and pedestrian plans.
1.1.2 Promote regional and local land use policies that encourage compact and multimodal-oriented development	1.1.2.1 Provide technical assistance to local partners on reducing greenhouse gas emissions and mitigating climate-related impacts through land use and zoning updates in their comprehensive plans (e.g., policies that encourage compact development, transit-oriented development, and a range of travel options).
	1.1.2.2 Explore updating Minnesota Department of Transportation's project prioritization process in collaboration with Metropolitan Planning Organizations to prioritize projects that enhance transit-oriented and walkable land uses.
1.1.3 Increase transit systems and shared mobility options	1.1.3.1 Prioritize transit and high occupancy vehicles on Minnesota Department of Transportation-owned right of way.
	1.1.3.2 Create more reliable and convenient transit networks, with priority given to communities with limited options and where residents are disproportionately impacted by air pollution.
	1.1.3.3 Encourage modal shifts away from single-occupant vehicles through infrastructure improvements, education, programs and services.
	1.1.3.4 Develop and improve multimodal options including intercity passenger rail and intercity bus within and between cities and regions.
1.1.4 Implement technological, financial, and market-driven solutions to decarbonizing transportation and increasing mobility	1.1.4.1 Support broadband connectivity, particularly for rural and underserved areas, to provide more options to provide increased telework and telehealth opportunities and reduce the need for travel.
	1.1.4.2 Provide point-of-purchase rebates for new and used e-bikes.

Initiative 1.2: Clean and efficient vehicles

Accelerate the transition to electric vehicles (EVs) or zero-emission vehicles (ZEVs) and advanced clean fuels

Sub-initiative	State action steps
1.2.1 Reduce the carbon intensity of transportation fuels	1.2.1.1 Develop a clean transportation fuels standard to incentivize increased investment in a broad portfolio of cleaner fuels, including advanced biofuels, renewable natural gas, other renewable fuels, sustainable aviation fuel, electricity, and charging infrastructure.
	1.2.1.2 Follow the Governor's Council on Biofuels recommendations.
1.2.2 Expand EV or ZEV charging infrastructure	1.2.2.1 Implement the Minnesota Electric Vehicle Infrastructure Plan that includes state actions to increase EV charging infrastructure, increase EV access and availability, and educate communities about the benefits of EVs.
	1.2.2.2 Coordinate with neighboring states, Tribal Nations, and other potential partners to implement the Regional Electric Vehicle (REV) Midwest Memorandum of Understanding which will establish an EV charging network across the Midwest.
	1.2.2.3 Increase funding for EV owners, workplaces, local governments, and other site hosts for Level 2 and DC fast charger stations.
	1.2.2.4 Increase funding for medium- and heavy-duty vehicle charging, including transit.
	1.2.2.5 Create opportunities to better connect co-ops, municipal utilities, and investor-owned utilities to discuss best practices related to EV chargers.
	1.2.2.6 Engage fuel providers to understand the role they would like to play in EV charger deployment.
	1.2.2.7 Amend state building code to support accessible EV charging and make new construction and commercial buildings EV-ready.
	1.2.2.8 Coordinate with state and federal agencies to identify opportunities for battery recycling and reuse.
1.2.3 Accelerate the adoption of light-duty EVs or ZEVs	1.2.3.1 Develop dealer and salesperson recognition and incentive program, building off efforts like the Xcel Energy Gold Status Dealer program.
	1.2.3.2 Encourage EV targets for government and corporate fleets, including light-duty vehicles.
	1.2.3.3 Create income-based car swap programs to replace older vehicles with EVs or ZEVs.
	1.2.3.4 Provide point-of-purchase rebates for new and used EVs.
	1.2.3.5 Advocate for stricter vehicle fuel economy and emissions standards at the federal level.
1.2.4 Transition to medium- and heavy- duty EVs	1.2.4.1 Set EV targets for medium- and heavy-duty vehicles in government fleets and promote targets for private, corporate fleets.
	1.2.4.2 Incentivize the retirement of inefficient vehicles and replacement with EVs or ZEVs.
	1.2.4.3 Explore options for transitioning to medium- and heavy-duty EVs or ZEVs.
1.2.5 Transition to zero-emission off-road vehicles, engines, and equipment	1.2.5.1 Develop a marketing campaign in collaboration with stakeholders (e.g., auto dealers) to improve consumer understanding of EVs and electrified off-highway equipment.
	1.2.5.2 Incentivize the retirement of inefficient off-road vehicles and other engines and equipment.
	1.2.5.3 Develop and implement a public education campaign on the benefits of zero-emission off-road vehicles, engines, and equipment (e.g., lawn mowers, ATVs, forklifts).

Initiative 1.3: Resilient and low carbon infrastructure and system management

Maximize resiliency and greenhouse gas mitigation in infrastructure and operations

Sub-initiative	State action steps
1.3.1 Optimize transportation system management and operations [e.g., to reduce peak demand and improve safety and reliability]	1.3.1.1 Evaluate actions that reduce vehicle demand for highways to reduce congestion in upcoming transportation planning processes.
	1.3.1.2 Encourage local governments to implement transportation demand management policies.
	1.3.1.3 Increase the installation of snow fencing and other structures that reduce winter maintenance.
	1.3.1.4 Consider and weigh the costs of greenhouse gas emissions during all phases of project (e.g., scoping, pre-design, design, bidding, installation, maintenance).
1.3.2 Design the transportation system to be resilient to climate hazards	1.3.2.1 Coordinate with partners to manage stormwater and support transportation infrastructure resilience to extreme weather.
1.3.3 Utilize low carbon materials and methods for constructing and maintaining transportation infrastructure	1.3.3.1 Prioritize the reuse of materials throughout construction process to minimize the carbon footprint of transportation construction projects.
	1.3.3.2 Prioritize the cost effectiveness of greenhouse gas emissions throughout the construction process (e.g., distance for materials to travel, variety of materials and mixes used on a site).
1.3.4 Utilize the transportation system right-of-way for alternative beneficial uses	1.3.4.1 Examine opportunities to advance Next Generation Highways by co-locating broadband and electricity transmission in highway right-of-way.
	1.3.4.2 Coordinate carbon sequestration efforts within highway right-of-way.
	1.3.4.3 Examine and coordinate the installation of renewable energy within the transportation right-of-way.

Goal 2 – Climate-smart natural and working lands

Enhance climate benefits by absorbing and storing carbon, reducing emissions, and sustaining resilient landscapes

Initiative 2.1: Carbon sequestration and storage in forested lands, grasslands, and wetlands

Manage forests, grasslands, and wetlands for increased carbon sequestration and storage

Sub-initiative	State action steps
2.1.1 Maintain, expand, and actively manage forestlands	2.1.1.1 Accelerate tree planting to expand forest cover where ecologically appropriate.
	2.1.1.2 Increase statewide seedling production to support tree planting efforts, including rectifying pinch points in seed supply and enhancing production of climate-adapted species.
	2.1.1.3 Invest in active forest management on public and private lands as a tool for promoting carbon uptake and reducing emissions from diseases, pests, and wildfires.
	2.1.1.4 Avoid conversion of forestland to other uses through private forest owner assistance, forestland acquisition and conservation easements, and sustainable forest management including timber harvest.
2.1.2 Protect, restore, and manage peatlands and other wetlands	2.1.2.1 Develop and share technical assistance on restoration of drained peatlands, with an emphasis on cropped and pastured peatlands and identify peatlands that can effectively be restored to stable hydrologic conditions, to increase resilience of these landscapes to rising temperatures.
	2.1.2.2 Protect and restore existing peatlands and other wetlands through conservation easements, wetland banking, and other land management programs and tools.
2.1.3 Protect, restore, and manage grasslands	2.1.3.1 Protect native prairie and prairie pothole wetlands as well as restored grasslands and wetlands through fee title acquisition of public lands and easements on private lands.
	2.1.3.2 Use high-diversity, climate-adapted seed mixes in restoration and address challenges in seed sourcing and supply for restoring grasslands and wetlands.
	2.1.3.3 Enhance and manage existing grasslands and wetlands.
2.1.4 Encourage individual actions that generate climate mitigation benefits	2.1.4.1 Promote small-scale actions on natural and working lands such as establishing pollinator and prairie plantings, enhancing shorelines, and planting trees and shrubs that can collectively add up to meaningful climate benefits.
	2.1.4.2 Foster individual and collective actions that produce meaningful climate mitigation benefits on natural and working lands.

Initiative 2.2 Resilient landscapes and ecosystems

Enhance the ability of plants and wildlife to adapt to the effects of climate change

Sub-initiative	State action steps
2.2.1 Conserve and enhance biodiversity	2.2.1.1 Restore and expand habitat complexes and corridors to protect wildlife and allow species to shift their range.
	2.2.1.2 Work with local governments in developing regional and local land conservation plans identifying priority locations for habitat protection, enhancement, and restoration.
	2.2.1.3 Manage invasive species through conservation partnership and recreation outreach to promote climate resilience.
	2.2.1.4 Foster individual and collective actions that conserve and enhance biodiversity.
2.2.2 Use land management practices that enhance climate resilience	2.2.2.1 Increase native species diversity in grassland and wetland restoration using locally appropriate seed mixes expected to do well under projected climate conditions.
	2.2.2.2 Plant, seed, or promote tree species expected to do well under projected climate conditions.
	2.2.2.3. Enhance the ability of forests to adapt to climate change using sustainable forest management strategies.

Initiative 2.3: Healthy farmland

Accelerate soil health and nitrogen and manure management practices that reduce emissions and enhance carbon storage, water quality, and habitat

Sub-initiative	State action steps
2.3.1 Increase soil organic carbon content and reduce erosion	2.3.1.1 Increase incentives and expand markets for practices such as cover crops, conservation tillage, diverse crop rotations, buffers, shelterbelts, hedgerows and perennial crops that sequester carbon and increase resilience by restoring soil health.
	2.3.1.2 Investigate feasibility and develop programs for use of biochar and other soil amendments on cropland, pastureland, and forestland.
	2.3.1.3 Expand incentive programs for farmers to preserve woodlands and incorporate new trees and natural habitat into agricultural landscapes, where ecologically appropriate, to protect against wind and water erosion and store carbon.
	2.3.1.4 Avoid conversion of prime farmland to developed land and promote more compact and efficient land use planning and development.
2.3.2 Manage fertilizer and manure to reduce emissions	2.3.2.1 Encourage and incentivize nitrogen and methane management practices that will reduce emissions through grants, education, and the Groundwater Protection Rule.
	2.3.2.2 Increase use of nitrogen management practices that will increase nitrogen use efficiency and reduce nitrous oxide emissions, such as nitrification inhibitors, split-N applications, precision agriculture, plant selection and breeding, soil amendment technologies and others.
	2.3.2.3 Develop and implement programs supporting adoption of methane reduction activities related to livestock and manure, such as livestock feed management, anaerobic digestion, manure storage covers and flares, and acidification management of manure storage.
2.3.3 Manage farmland for multiple benefits	2.3.3.1 Increase the range of compatible uses of conserved lands such as haying, grazing, or tree crops to increase participation in land conservation easement programs.
	2.3.3.2 Promote conversion of marginal farmland to pastureland, perennial crops, woodland, and forage crops to enhance carbon capture, water quality protection, and wildlife habitat through set-aside programs.
	2.3.3.3 Promote and fund production forestry, short rotation woody crops, and using trees as windbreaks in agricultural settings where ecologically appropriate.
	2.3.3.4 Incentivize and expand best management practices (BMPs) for climate-resilient agricultural and forestry implementation assistance, such as access to technologies, equipment, and seed and plant material.
	2.3.3.5 Provide support to farmers to adopt practices that decrease emissions, improve soil health, sequester carbon and improve water quality, through programs like the Minnesota Agricultural Water Quality Certification Program or similar programs.

Initiative 2.4: Sustainable landscapes and water management

Improve climate resiliency through multi-purpose water storage and management practices

Sub-initiative	State action steps
2.4.1 Manage agricultural landscapes to minimize nitrogen runoff and pollution	2.4.1.1 Prioritize groundwater and drinking water protection in vulnerable areas.
	2.4.1.2 Protect, restore, and enhance perennial cover in priority Drinking Water Supply Management Areas.
	2.4.1.3 Protect, restore, and enhance wetlands to absorb, filter, and use excess nutrients and help recharge and protect groundwater and drinking water.
	2.4.1.4 Implement the Nitrogen Fertilizer Management Program in vulnerable areas as defined by township testing results.
	2.4.1.5 Promote fertilizer and manure application practices that minimize nitrogen loss through implementation of the Feedlot Rule and General Permit.
2.4.2 Manage natural and working lands to hold water and reduce runoff	2.4.2.1 Increase water storage, infiltration, and drainage management to reduce runoff, prevent depletion of aquifers, and minimize downstream flooding, erosion, and habitat loss.
	2.4.2.2 Restore natural stream stability where possible to reduce erosion, increase habitat diversity, and decrease maintenance and infrastructure costs.
	2.4.2.3 Assist local government units with identifying and prioritizing locations for water storage as part of watershed planning, emphasizing practices such as wetland and floodplain restoration, drainage water management, and buffer establishment.
	2.4.2.4 Encourage water recycling where feasible to sustain aquifers and lessen demands on drinking water supplies.
	2.4.2.5 Encourage multipurpose drainage design and retrofitting that provides adequate drainage capacity while reducing downstream peak flows, erosion, and sedimentation, and improving water quality and aquatic habitat.
	2.4.2.6 Retain and manage forests that store rainwater and snowmelt and reduce flood risk—buffering against the negative impacts of changing precipitation patterns.
	2.4.3.2 Retain and manage grasslands and wetlands to hold water and reduce runoff.

Initiative 2.5: Investments in emerging crops, products, and local economies

Invest and support research in emerging agricultural and forest products, reduce waste and expand economic opportunities

Sub-initiative	State action steps
2.5.1 Strengthen sustainable agricultural production systems and develop markets for climate-benefitting products	2.5.1.1 Invest in new markets and supply chains for perennial crops and harvestable crops that keep soil covered year-round.
	2.5.1.2 Support and expand genetic and agronomic research and market/supply-chain development for crops that increase carbon sequestration, require less water, reduce nitrogen loss, and improve landscape resiliency and adaptation.
	2.5.1.3 Identify opportunities for farmers and landowners to participate in ecosystem services markets (e.g., for carbon removal, flood protection, and water quality) that incentivize best management practices for climate mitigation and adaptation.
	2.5.1.4 Support development, production, and use of low-greenhouse-gas farm inputs such as fertilizers, chemicals, and other products.
	2.5.1.5 Promote agricultural feedstocks for sustainable aviation fuel.
	2.5.1.6 Invest in new markets and supply chains for small grains, legumes, and other alternative grains grown in Minnesota.
2.5.2 Promote the use of wood products and residual forest products to store carbon and reduce GHG emissions	2.5.2.1 Enhance markets for existing long-lived wood products that increase carbon storage and replace more fossil-fuel-intensive materials.
	2.5.2.2 Stimulate markets for emerging forest products — such as engineered wood, biochemicals, biofuels, and environmental remediation products — that can reduce greenhouse gas emissions by providing a low-carbon alternative to fossil-fuel-intensive products.
	2.5.2.3 Incentivize beneficial uses of waste wood and wood residuals (e.g., waste wood generated from insects and disease, harvest residuals, and sawdust) to diversify forest products markets and reduce the need for energy from other sources.
	2.5.2.4 Increase competitiveness of lower-value wood products that are generated from thinning and other climate adaptation management practices.
	2.5.2.5 Launch consumer education campaigns to tell the story of Minnesota's harvested wood products and their role in meeting the state's climate mitigation and adaptation goals.
2.5.3 Support local food markets, urban agriculture, and emerging farmers	2.5.3.1 Promote tribal, local, and community-based agriculture to promote economic vitality and increase healthy, fresh food access, especially in underserved communities.
	2.5.3.2 Continue and expand the Emerging Farmer Program and similar programs for farmers and agricultural/food entrepreneurs, with particular attention to advancing inclusion and equity.
	2.5.3.3 Explore and promote greenhouse gas emissions reductions in tribal and local food systems.
2.5.4 Reduce waste and promote beneficial use of food and organic materials	2.5.4.1 Increase organics recycling through support of programs and infrastructure and promotion of organics recycling end-products for soil amendments, energy, and other beneficial uses.
	2.5.4.2 Incentivize and reduce barriers for local and regional food donation, food rescue, food-to-animal programs, and related efforts that prevent food waste and manage food scraps.
	2.5.4.3 Support local governments with guidance and resources to conduct public education campaigns such as prevention of wasted food and zero waste challenges.

GOAL 3 – Resilient communities

Ensure all Minnesota communities are prepared for, can respond to, and recover from climate impacts and extreme weather.

Initiative 3.1: Climate-smart communities

Build Minnesota communities' capacity to protect against and withstand the effects of climate change

Sub-initiative	State action steps
3.1.1 Support communities in the development of climate resilience plans	3.1.1.1 Provide training and tools to identify climate risks and prioritize actions to build resiliency for local and Tribal governments.
	3.1.1.2 Develop and expand individualized climate resilience guidance to communities.
	3.1.1.3 Create and maintain an interactive, comprehensive website that improves centralized access to up-to-date climate resilience planning information, data, and funding opportunities.
	3.1.1.4 Increase peer learning about resilience best practices through the GreenStep Cities and Gold Leaf Challenge programs and expand pilot programs for Tribal Nations, schools, counties, and townships.
	3.1.1.5 Coordinate with partners, including the Minnesota Climate Adaptation Partnership, to promote climate resilience planning training and tools, including climate modeling data tools such as CliMAT.
	3.1.1.6 Provide education resources for communities to improve public understanding of local climate impacts and adaptation actions.
	3.1.1.7 Develop and implement community-level resilience metrics that identify baselines, set clear objectives, and evaluate capacity, scalability, and cost-effectiveness.
3.1.2 Fund planning and implementation for community and statewide resilience through multiple sources	3.1.2.1 Establish dedicated funding for local climate resiliency capacity, assessments, planning, implementation, maintenance, data monitoring, and analysis.
	3.1.2.2 Explore opportunities for long-term, dedicated sources of state funding to support local, regional, Tribal, and statewide resilience priorities.
	3.1.2.3 Expand public/private financing and philanthropic opportunities, such as revolving loan funds, for climate resilience and adaptation planning and implementation.
	3.1.2.4 Provide climate resilience programs, including for climate planning and implementation, climate-ready schools, community forestry resilience, and expanding local and regional staff capacity and expertise.
	3.1.2.5 Increase financial assistance for local and regional disaster preparedness, response, and recovery.
3.1.3 Integrate climate resilience into local, regional, and state planning	3.1.3.1 Encourage counties to integrate adaptation strategies into county hazards mitigation plans, using Minnesota's state hazard mitigation plan as a guide.
	3.1.3.2 Encourage all communities to have a preparedness plan for extreme weather events, including contingencies for multiple events.
	3.1.3.3 Use high-resolution, dynamically downscaled climate projections to inform planning and design efforts across Minnesota.
	3.1.3.4 Develop local and statewide maps to improve understanding of climate risks and vulnerabilities.

Initiative 3.2: Healthy community green spaces and water resources

Expand and protect tree canopies; parks and other green spaces; and lakes, rivers, and wetlands that provide multiple community resilience benefits.

Sub-initiative	State action steps
3.2.1 Advance community forestry	3.2.1.1 Encourage preservation of mature trees through heritage tree preservation and management policies and programs on public and private lands.
	3.2.1.2 Support the management of emerald ash borer and other emerging plant pests and diseases in communities through treatment, removal and replacement, proper disposal, and financial assistance.
	3.2.1.3 Assess community tree canopy cover and other tree baseline data across the state to help communities track and measure tree canopy goals.
	3.2.1.4 Promote tree inventory data tools for communities, including Tree Equity Score, Metropolitan Council's Growing Shade tool, USFS "Tree Canopy" tool, and the University of Minnesota's Land Cover and Urban Tree Canopy tools.
	3.2.1.5 Increase community tree canopy coverage through plantings, increased capacity for tree care and forestry, and tree care education, job training, and community-led planning and decision-making.
	3.2.1.6 Grow and maintain climate-adaptive shade trees in communities.
	3.2.1.7 Prioritize community forestry actions in disproportionately impacted communities that decrease building energy use, mitigate heat islands, and replace pest-infected or diseased trees.
3.2.2. Plant beneficial vegetation on public and private green spaces to promote climate resiliency and adaptation	3.2.2.1 Provide education, technical assistance and funding to establish climate resilient plantings including pollinator gardens, prairies, woodlands, shoreline plantings, lawn alternatives, and community agriculture in parks, community gardens, schools, and other public spaces.
	3.2.2.2 Support the efforts of Minnesota residents with an emphasis on engaging the next generation of stewards through education, technical assistance and funding to establish native vegetation in yards, shorelines, and naturalized areas to support pollinators, sequester carbon and increase climate resilience.
	3.2.2.3 Promote incorporation of native vegetation as part of ground-mounted solar development to support pollinators and biodiversity.
	3.2.2.4 Increase the management of invasive species within communities to increase the resilience of ecosystems and native species and provide habitat and water quality benefits.
3.2.3. Protect and improve water quality and manage water quantity to support community resilience	3.2.3.1 Protect and increase water storage in community spaces to reduce downstream flooding, improve water quality, and retain water during seasonal droughts.
	3.2.3.2 Improve water quality in communities through watershed-scale planning and targeting of priority areas.
	3.2.3.3 Protect and restore natural shorelands and riparian corridors by updating state and local regulations, increasing technical assistance, and strengthening state-local partnerships.

Initiative 3.3: Resilient infrastructure

Increase climate resilience in the built environment

Sub-initiative	State action steps
3.3.1. Assess climate vulnerabilities of public facilities and infrastructure, giving priority to essential and critical assets.	3.3.1.1 Identify locations subject to localized and large-scale flooding by accelerating updates to flood data and maps statewide using LiDAR and improved forecasting.
	3.3.1.2 Assess civil infrastructure vulnerability using mapping tools and update the Minnesota Infrastructure Stress Transparency Tool.
	3.3.1.3 Prioritize infrastructure improvements and maintenance that enhance resilience.
3.3.2. Modify programs and regulations to address climate impacts and encourage adaptation over time	3.3.2.1 Develop and incorporate policies and provisions in construction and remodeling codes that prioritize resilient design standards and other best practices to adapt critical facilities and infrastructure.
	3.3.2.2 Engage communities in the development of design standards and guidance for resilience hubs that consider the site and location and include independent power capability, air cooling, provisions, and other community-specific needs.
	3.3.2.3 Update the state floodplain management rules for critical facilities, mitigating risk in areas beyond currently mapped floodplain areas, and encouraging no net loss of floodplain storage in response to projected climate conditions.
	3.3.2.4 Develop guidance, model ordinances, and technical support to ensure that local government units adopt, administer, and enforce the most recent floodplain management ordinances.
	3.3.2.5 Adopt updated MN Rule 1335 to replace adoption of 1972 floodproofing rules by reference to ASCE 24 and encourage local adoption of floodproofing rules that meet or surpass minimum requirements of the most recent national standards (ASCE 24-24 Flood Resistant Design and Construction).
	3.3.2.6 Develop and incorporate design standards and guidance to reduce wildfire risk in the wildland-urban interface of rural forested communities.
3.3.3. Increase the resilience of existing infrastructure and redevelopment	3.3.3.1 Design and build local transportation infrastructure to manage stormwater and to improve long-term flood resiliency, including promoting natural flow distribution and aquatic organism passage.
	3.3.3.2 Avoid siting state, public, and critical facilities and services in high-risk areas, use nature-based solutions, and incorporate resilient design.
	3.3.3.3 Encourage the implementation of resilient energy systems such as neighborhood-scale microgrids to keep electricity flowing during an outage and thermal energy networks for heating and cooling.
3.3.4 Expand stormwater system capacity and green infrastructure to prevent flooding	3.3.4.1 Provide funding and technical assistance to establish nature-based solutions and other stormwater capacity systems in communities to protect buildings and infrastructure in flood-prone areas.
	3.3.4.2 Increase incentives for the use of green stormwater infrastructure practices in developments within state stormwater permitting and financial assistance programs.
	3.3.4.3 Promote water storage and reuse into stormwater management to hold or distribute water during and after large rain events, including restoring wetlands to support water storage in flood-prone areas, to protect buildings and infrastructure and support watershed health.

Sub-initiative	State action steps
3.3.5 Mitigate excessive heat and implement actions that help communities adapt	3.3.5.1 Provide funding and technical assistance to help communities mitigate excessive heat and reduce their heat islands, prioritizing disproportionately impacted communities based on temperature data, health data, and social determinants of health.
	3.3.5.2 Develop new and improve existing cooling centers in preparation of extreme heat.
3.3.6. Advance sustainable land use and new development that incorporates resilience	3.3.6.1 Provide technical assistance and funding for local and regional economic development and community energy transition to help communities and small businesses adapt to climate change impacts and transition their services (e.g., tourism, sports, recreation).
	3.3.6.2 Ensure that community infrastructure and services are powered and maintained to withstand climate- and weather-related impacts.
	3.3.6.3 Incentivize dense infill development in communities, including clean-up and beneficial reuse of brownfields, to efficiently use land, decrease sprawl, and reduce travel distances to goods and services.
	3.3.6.4 Encourage the implementation neighborhood-scale thermal energy networks for efficient heating and cooling.

GOAL 4 – Clean energy and electricity

Expand the use of carbon-free energy sources

Initiative 4.1: Grid adaptation and enhancement

Promote electrical grid and transmission upgrades to enable greater reliability and renewable energy access

Sub-initiative	State action steps
4.1.1 Upgrade transmission and distribution infrastructure and deploy grid-enhancing technologies	4.1.1.1 Accelerate the use of grid-enhancing technologies and smart-grid enhancements that improve capacity, efficiency, and reliability of existing electricity transmission lines.
	4.1.1.2 Establish flexible interconnection solutions to accelerate small-scale energy generation and storage connections to the electric grid.
	4.1.1.3 Advance research and development to integrate carbon-free and distributed energy resources via state funding.
4.1.2 Deploy existing and innovative utility-scale storage technologies	4.1.2.1 Support the deployment of clean, dispatchable energy storage that ensures power is always available.
4.1.3 Advance distributed generation and storage	4.1.3.1 Support clean distributed generation and storage projects that are construction-ready and are readily able to be aggregated and utilized (e.g., virtual power plants).

Initiative 4.2: Clean energy sources

Accelerate deployment of carbon-free energy

Sub-initiative	State action steps
4.2.1 Transition to 100% carbon-free electricity and build community and Tribal acceptance	4.2.1.1 Implement Minnesota Energy Infrastructure Permitting Act to accelerate siting, permitting, and deployment of clean energy.
	4.2.1.2 Proactively engage the public on proposed large-scale energy infrastructure projects.
	4.2.1.3 Explore community and Tribal incentives that can build acceptance for energy projects, such as federal energy production tax credits and community investment shares.
	4.2.1.4 Standardize decommissioning requirements for energy infrastructure.
4.2.2 Accelerate the growth of large-scale clean energy generation	4.2.2.1 Implement the 100% carbon-free electricity by 2040 law considering existing and emerging technologies, the need for programmatic support, and barriers to scalability or adoption.
	4.2.2.2 Evaluate resource adequacy for new energy users locating in Minnesota.
4.2.3 Strategically repurpose energy generation facilities and associated grid interconnections	4.2.3.1 Through compliance with the 100% carbon-free electricity by 2040 law, continue expanding advocacy at regional and national authorities and organizations (FERC, MISO, SPP, OMS, etc.).

Initiative 4.3: Dispatchable clean energy and storage

Develop and deploy clean generation and long-duration storage technologies that balance supply and demand

Sub-initiative	State action steps
4.3.1 Advance research and development for long-duration storage and dispatchable clean generation	4.3.1.1 Fund research and development on long-duration storage opportunities, including monetization mechanisms.
4.3.2 Support full deployment of long-duration storage and dispatchable clean generation	4.3.2.1 Support demonstrations and pilots of long-duration storage and dispatchable clean generation.
	4.3.2.2 Identify opportunities, including market enhancements, to scale up and fully deploy clean generation and storage technologies.
	4.3.2.3 Support the deployment of long duration storage.

Goal 5 – Healthy lives and communities

Protect health and advance equity in a changing climate

Initiative 5.1: Cooler, safer communities

Keep people and places protected from extreme heat's harmful effects

Sub-initiative	State action steps
5.1.1 Make heat-safe housing more affordable and easier to access	5.1.1.1 Strengthen renter home-cooling protections using incentives and policies.
	5.1.1.2 Ensure more people can afford home cooling by strengthening energy assistance and utility affordability programs.
	5.1.1.3 Work with government and community partners to find obstacles to home weatherization programs and share information suited to different groups.
5.1.2 Advance heat-resilient community design	5.1.2.1 Refine educational resources, provide technical assistance, and deliver trainings for local public health and Tribal health departments to support heat resilience in communities.
	5.1.2.2 Coordinate across agencies to provide climate resilience, heat adaptation, and public health programs and support to communities.
5.1.3 Make workplaces safer by strengthening heat safety protection for indoor and outdoor workers	5.1.3.1 Track heat-related health effects and gather insights from workers and partners to understand how heat impacts outdoor jobs.
	5.1.3.2 Create clear guidelines to help workplaces protect workers from unsafe heat exposure.
	5.1.3.3 Explore creating policies to keep outdoor worker safe during extreme heat.
5.1.4 Make schools and childcare centers safer from extreme heat	5.1.4.1 Develop and share heat-safety guidelines for school and childcare centers, and study options for updating standards.
	5.1.4.2 Help agencies and partners make schools and childcare centers more climate-resilient by improving infrastructure and adding health protections for extreme heat and poor air quality.
5.1.5 Make group homes, care facilities, and prisons safer from extreme heat	5.1.5.1 Work together across agencies to make residential facilities more climate-resilient by improving infrastructure and adding health protections for extreme heat and poor air quality.
5.1.6 Advance planning, research, and information sharing for an effective extreme heat response informed by public health data and community input	5.1.6.1 Create a Minnesota Heat Roadmap with research on extreme heat, action steps, and timeline for planning.
	5.1.6.2 Make heat-related symptoms tracking data easier to understand and use and share findings with local public health and Tribal health.
	5.1.6.3 Update and share heat safety communications materials to improve public awareness and help partners understand health risks.
	5.1.6.4 Study how extreme heat affects negative behaviors in Minnesota to better inform prevention strategies and community support efforts.

Initiative 5.2: Clean air

Protect Minnesotans from poor air quality due to pollution and wildfire smoke

Sub-initiative	State action steps
5.2.1 Share guidance to protect people from poor air quality in their homes, communities, and workplaces	5.2.1.1 Keep sharing guidance for outdoor workers, recreational users, and high-risk groups while exploring ways to work with decisionmakers to ensure indoor air safety during poor air quality days.
	5.2.1.2 Collaborate with agencies and other groups to ensure clear, accessible messaging for all communities.
5.2.2 Strengthen understanding of health impacts of poor air quality and increase use of data tools	5.2.2.1 Enhance and expand the statewide system for tracking health symptoms during poor air quality.
	5.2.2.2 Make air quality and health impact tracking easier to understand by improving data visuals, sharing information with Emergency Medical Services, and using data to identify at-risk communities and focus prevention efforts where needed.
5.2.3 Make it easier for agencies and sectors to work together on air and health initiatives	5.2.3.1 Strengthen interagency collaboration between the Minnesota Air and Health Initiative and wildfire response, home weatherization programs, asthma services, and transportation.
	5.2.3.2 Expand efforts to help local public health and Tribal health departments provide home-based asthma care and education for families.

Initiative 5.3: Safe water

Ensure Minnesotans have reliable access to clean drinking water

Sub-initiative	State action steps
5.3.1 Improve flood planning and backup systems to keep public drinking water safe during and after floods or wildfires	5.3.1.1 Create a grant program to set up backup wells and emergency power for public drinking water.
	5.3.1.2 Help reduce flood risks to public drinking water by offering technical assistance.
5.3.2 Expand support and testing for private well users so that their drinking water is safe during and after floods or wildfires	5.3.2.1 Keep providing support to help private well users protect their water before, during, and after floods, droughts, and wildfires.
	5.3.2.2 Expand access to test kits for private well users following flooding events or wildfires.

Initiative 5.4: Community care

Strengthen social connection, mental health, food security, and access to nature amid climate change

Sub-initiative	State action steps
5.4.1 Provide culturally appropriate behavioral health care services and resources after climate-related disasters or emergencies	5.4.1.1 Maintain disaster behavioral health care services, such as Psychological First Aid training, and improve reach, cultural relevance, and continuity of mental health services.
	5.4.1.2 Maintain the Behavioral Health Medical Reserve Corp and boost volunteer recruitment and retention.
5.4.2 Help people cope with and recover from the mental, emotional, and social challenges caused by climate change and related issues	5.4.2.1 Provide updated resources for the public on the Minnesota Department of Health wellbeing and climate change webpage while increasing awareness and accessibility, including translated materials.
	5.4.2.2 Expand access to nature to support mental health and wellbeing through outdoor activities and education for all ages.
	5.4.2.3 Assess the impact of climate change on mental health and well-being, informing awareness, investment, and community capacity-building.
5.4.3 Strengthen social cohesion to ensure that communities are connected, supported, and equipped to withstand climate-related challenges	5.4.3.1 Expand community access to essential services and climate resilience hubs while strengthening coordinated messaging.
	5.4.3.2 Conduct a social cohesion and resource utilization assessment to address gaps in social connection and resource utilization across the State.
5.4.4 Preserve culturally significant places and adapt outdoor recreation and public lands amid climate change	5.4.4.1 Partner with communities and Tribal Nations to support and co-develop research projects and share knowledge to address the impacts of changing ecosystems on mental health and well-being.
	5.4.4.2 Adapt outdoor recreation on public lands for a changing climate and to serve changing demographics.
	5.4.4.3 Ensure public lands are managed in a way that restores or conserves healthy ecosystems, while balancing the needs of communities to interact with healthy landscapes.
	5.4.4.4 Protect and restore outdoor recreation areas from the impacts of extreme weather impacts in collaboration with outdoor recreational stakeholders and partners.
	5.4.4.5 Collaborate with Tribal Nations, diverse communities, and other organizations to identify and protect culturally significant places and resources.
5.4.5 Reduce food insecurity by increasing access to local, healthy, and culturally appropriate foods	5.4.5.1 Strengthen public health systems to ensure equitable access to nutritious foods and essential resources during climate crises.
	5.4.5.2 Advance understanding of climate-related impacts on food security, including for local fishing communities and Tribal Nations.
	5.4.5.3 Expand support for local organizations and governments to address food security and increase access to local, healthy, and culturally appropriate foods.
	5.4.5.4 Protect people from exposure to toxic metals in food, soil, and water caused by climate pollution and climate change impacts.

Initiative 5.5: Climate-smart public health

Strengthen capacity, communications, and preparedness to protect health amid climate change

Sub-initiative	State action steps
5.5.1 Increase understanding of how climate change impacts health and who is most at risk	5.5.1.1 Strengthen and expand climate-related data tracking to improve public health planning, emergency preparedness, and health equity analysis.
	5.5.1.2 Monitor patterns in vectorborne and other infectious diseases to detect climate-related change and protect communities from emerging disease.
5.5.2 Communicate the health impacts of climate change through stories, data, and collaboration between governments, community organizations, medical professionals, local leaders, and other trusted messengers	5.5.2.1 Develop a clear, accessible climate and health communications plan that connects communities with important data and stories.
	5.5.2.2 Strengthen cross-sector collaboration to improve coordination, resource-sharing, and data-driven decision-making between governments, community organizations, medical professionals, local leaders, and other trusted messengers, integrating climate and health data to enhance resilience.
	5.5.2.3 Equip local public health and Tribal health with training and emergency response tools to improve climate preparedness.
	5.5.2.4 Increase education and outreach to help people stay safe outdoors from ticks, mosquitos, and other climate-related disease risks.
5.5.3 Strengthen capacity of state, local, and Tribal public health agencies to reduce climate-related health risks	5.5.3.1 Strengthen public health capacity through education, collaboration, and data-sharing to help state, local, and Tribal agencies address climate-related health risks.
	5.5.3.2 Increase support for local action that reaches populations vulnerable to climate-related health impacts.
	5.5.3.3 Integrate climate change considerations into emergency response planning and drills to improve emergency preparedness.

Initiative 5.6: Strategic climate and health action

Advance equity, resilience, and justice for Minnesotans

Sub-initiative	State action steps
5.6.1 Create systems for collaboration between community advocates and public leadership so that community concerns and solutions directly inform climate policies and programs	5.6.1.1 Explore building a Minnesota Climate Action Network to connect residents, organizations, and governments, making it easier to share information and resources for climate action and improve coordination.
5.6.2 Evaluate existing programs to improve alignment with climate resilience and health equity goals and avoid investments that worsen climate and health outcomes	5.6.2.1 Assess how state-funded programs contribute to climate and community resilience and align with climate and health goals.
	5.6.2.2 Develop recommendations to improve state program alignment with climate and health goals, including addressing barriers to access for communities overburdened by climate change impacts.
	5.6.2.3 Develop a grant template and training to support state program directors and grant staff – whether directly focused on climate resilience or not – to consider potential impact on community and environmental resilience and improve climate resilience efforts.
	5.6.2.4 Launch a pilot program to proactively align existing grant programs to accelerate climate resilience efforts.
5.6.3 Prioritize communities facing disproportionate climate impacts when distributing funds and resources and address barriers to access	5.6.3.1 Create a strategy to ensure that 40% of state climate funds benefit communities facing disproportionate climate impacts.
	5.6.3.2 Develop a strategy to track and report state climate funds.
5.6.4 Assess existing climate action and sustainability initiatives to incorporate climate and health priorities	5.6.4.1 Maintain a cross-agency team to integrate health equity into climate action, ensuring collaboration, clear communication, and effective policy implementation.
	5.6.4.2 Analyze how health, equity, climate adaptation, and housing costs – including insurance – impact communities in Minnesota.

Goal 6 – Clean economy

Build a thriving carbon-neutral economy that produces goods and services with environmental benefits and equitably provides family-sustaining job opportunities

Initiative 6.1: Clean, sustainable, and resilient industrial businesses

Reduce emissions by helping businesses adopt technologies and strategies that benefit them, Minnesotans, and the environment

Sub-initiative	State action steps
6.1.1 Incentivize industrial businesses to adopt low-carbon technologies and strategies with support available to businesses of all sizes and in all communities	6.1.1.1 Help industrial businesses invest in clean technologies and strategies by using existing financial incentives under the Energy Conservation Optimization Act and the Natural Gas Innovation Act, Minnesota Climate Finance Innovation Authority, and by creating new programs such as low-interest loans, rebates, grants, and tax credits.
	6.1.1.2 Support and grow industries that make low-carbon products through the Buy Clean and Buy Fair Minnesota Act and by encouraging other public and private organizations to adopt similar policies.
	6.1.1.3 Support cross-sector approaches to reduce emissions and waste, like integrating waste heat from industrial and other facilities into district energy systems that heat or cool nearby buildings, by encouraging collaboration and offering incentives so businesses and households benefit.
	6.1.1.4 Ensure businesses of all sizes and in all communities, especially those historically excluded, can access support for clean technology adoption through programs like the Minnesota Climate Finance Innovation Authority and new initiatives.
6.1.2 Explore policies that support flexible adoption of low-carbon technologies and strategies by businesses, while helping meet statewide emissions goals	6.1.2.1 Ensure Minnesota's policies and programs cut supply chain emissions by building more clean production and sourcing within the state, not shifting pollution elsewhere.
	6.1.2.2 Explore clean heat policies that give businesses flexible options to switch to low-emission heating, such as heat pumps, renewable natural gas, and geothermal.
	6.1.2.3 Explore policies that give businesses flexible, cost-effective ways to reduce emissions, while supporting innovation, investment, and growth opportunities.
	6.1.2.4 Explore ways to track, report, and verify emissions with tools and guidance that are easy to use and transparent for businesses and agencies.
6.1.3 Support businesses' access to clean technologies and strategies through outreach and technical assistance, delivered in partnership with regional governments, universities, community organizations, and others	6.1.3.1 Ensure outreach and technical assistance are accessible to businesses of all sizes, including those owned by women, people of color, veterans, people with disabilities, and others who have been excluded from opportunities in the past.
	6.1.3.2 Maintain and expand programs that help businesses identify the best ways to reduce costs while benefiting the environment like the Minnesota Technical Assistance Program, Minnesota Retiree Environmental Technical Assistance Program, Clean Energy Resource Teams, and Energy Smart.
	6.1.3.3 Work with regional partners and businesses to identify and pursue clean economy opportunities that support growth, address regional needs, and help meet the state's emissions reduction goals.
	6.1.3.4 Grow the supply of and demand for clean products in Minnesota through partnerships like the Bioeconomy Coalition of Minnesota, giving local businesses an early advantage in national and international markets.

Initiative 6.2: Clean fuel and clean technology innovation

Create pathways to develop, test, and deploy affordable and scalable technologies that reduce emissions from industrial processes

Sub-initiative	State action steps
6.2.1 Encourage technologies that help businesses improve energy efficiency and switch to electricity where possible	6.2.1.1 Expand new and existing clean energy businesses and technologies through partnerships like Minnesota Energy Alley and with continued funding for demonstration and other early-stage clean technology projects.
	6.2.1.2 Evaluate current thermal energy projects, such as those funded by Geothermal Planning Grants, for growth opportunities, and continue supporting research into new methods and applications.
	6.2.1.3 Monitor developing technologies that could make electricity generation cheaper and easier to scale, and consider them for future feasibility studies, such as advanced nuclear technology that improves efficiency and safety.
6.2.2 Advance cost-effective, scalable clean fuel technologies that reduce emissions across the full lifecycle, not just when fuels are used	6.2.2.1 Support low-carbon fuels made in Minnesota or with Minnesota products, such as wood waste, winter oilseeds, clean hydrogen, solid waste, and captured carbon, through existing policies like tax credits, production payments, and blending standards, and creation of new programs to increase production in Minnesota.
	6.2.2.2 Support new and existing renewable natural gas projects from diverse producers and feedstocks through production incentives and infrastructure development funding, making gas available for electricity, transportation, heating and industrial use.
	6.2.2.3 Support existing clean hydrogen projects and programs like the St. Cloud Green Hydrogen Project, CenterPoint Energy's pilot, the Heartland Hydrogen Hub, and Duluth's green iron facility, and identify new opportunities through research grants, such as transportation and industrial uses.
6.2.3 Encourage the development and use of carbon capture, storage, and utilization technologies, focusing on methods that are cost-effective, store carbon for long periods, and are not used to support activities that increase overall emissions	6.2.3.1 Explore policy approaches to define, track, and incentivize a wide range of carbon sequestration methods, including biological, geological, and utilization, and build public understanding of carbon sequestration's role in meeting emissions reduction goals.
	6.2.3.2 Learn from current geological carbon storage projects in Minnesota, such as the Tamarack carbon mineralization pilot, and explore regulations that would support future demonstration and deployment.
	6.2.3.3 Encourage carbon storage in natural and working lands through existing and expanded education, land management programs, and policy or financial support, including long-term storage in wood products.
	6.2.3.4 Build partnerships and assess new ways to support and incentivize research, testing, and market development of technologies and systems needed to turn captured carbon into useful products that store carbon long-term using affordable, scalable methods.

Initiative 6.3: Strong circular economy

Reduce emissions and waste through reuse, repair, recycling, and decreasing demand for new materials

Sub-initiative	State action steps
6.3.1 Reduce waste from homes, businesses, and industry by focusing on prevention and reuse	6.3.1.1 Support reuse, rental, sharing, and repair services and spaces by supporting community programs, offering grants, training repair technicians, and investing in business and workforce development efforts.
	6.3.1.2 Encourage people to buy reused and repaired goods through public campaigns, consumer marketing, and education about right-to-repair laws.
	6.3.1.3 Prevent food waste from businesses and organizations that throw away large quantities of food by offering incentives for food donation and rescue, providing technical assistance to improve food management practices, and requiring annual tracking and reporting.
	6.3.1.4 Support households in reducing food waste by promoting meal planning, smart shopping, proper food storage, and increased understanding of food date labels.
	6.3.1.5 Help businesses, governments, and organizations switch from single-use food and beverage containers and utensils to reusable ones through incentives, grants, rebates, and government purchasing policies.
	6.3.1.6 Prevent wood and material waste by offering incentives for tree care, building maintenance, and building material reuse.
6.3.2 Increase recycling at homes, businesses, and industrial sites, and promote the use of recycled materials	6.3.2.1 Increase recycling by educating the public, making recycling convenient, offering financial incentives, improving processing systems, and implementing Extended Producer Responsibility policies.
	6.3.2.2 Strengthen markets for recycled materials by offering incentives, providing business development assistance, improving communication, and updating government procurement policies, for example using compost for public construction and landscaping projects, incentivizing use of waste wood, and creating systems to capture and process new and difficult-to-recycle materials.
	6.3.2.3 Increase organics recycling, including composting, anaerobic digestion, and feeding food scraps to livestock, by adding new facilities, improving curbside and drop-off collection options, raising public awareness, and creating incentives and requirements for businesses.
6.3.3 Reduce greenhouse gas emissions from waste systems and encourage capturing emissions for use as a renewable energy source	6.3.3.1 Improve energy and material efficiency in waste and wastewater collection and processing, using strategies such as streamlining collection routes and timing, requiring pre-processing of waste, and using waste heat.
	6.3.3.2 Establish methane emissions rules and incentivize methane capture from waste systems including landfills, wastewater treatment processes, and agricultural waste to produce clean energy.

Initiative 6.4: Resilient and equitable clean economy workforce

Prepare workers for new, existing, and changing career opportunities and create high-quality, accessible clean economy jobs

Sub-initiative	State action steps
6.4.1 Support workers and communities that depended on climate-vulnerable or carbon-intensive industries	6.4.1.1 Help workers in climate-vulnerable or carbon-intensive industries whose jobs are shrinking or disappearing transition to in-demand careers through efforts like the Dislocated Worker Program, Adult Career Pathways, and others.
	6.4.1.2 Develop and promote clear education and career pathways for clean economy jobs.
6.4.2 Develop and promote clear education and career pathways for clean economy jobs	6.4.2.1 Using a broad, inclusive definition of clean jobs, create and implement a statewide plan to grow clean jobs at new and existing businesses, which includes identifying growing or at-risk industries, regional needs, employer needs, relevant training programs, and who has access.
	6.4.2.2 Work with businesses, labor groups, including unions, nonprofits, and education institutions to create and support inclusive workforce strategies that help new and existing workers prepare for today's changing jobs and technologies, such as Registered Apprenticeship Programs, Minnesota Job Skills Partnership grants, and dual training pipeline.
	6.4.2.3 Help youth prepare for and access clean economy careers by expanding school and community STEM programs, continually aligning Career and Technical Education programs with industry needs, raising awareness of these careers, and continuing support for programs like the Minnesota Youth Program and Youthbuild.
	6.4.2.4 Share clean economy career pathway information with people from diverse backgrounds, including students, job seekers, professional associations, community-based organizations, and organizations that help people find work.
6.4.3 Work with employers to create high-quality clean economy jobs that are accessible to all	6.4.3.1 Help employers meet their workforce needs with a diverse set of workers through programs such as Adult Career Pathways, Adult Basic Education, pre-apprenticeships and Registered Apprenticeship Programs, as well as programs through community-based organizations.
	6.4.3.2 Share best practices for reaching more diverse talent pools with employers and explain why it matters, especially in industries where many of workers will retire in the next few years.
	6.4.3.3 Promote job quality in the clean economy – fair pay, benefits, safe working conditions, and opportunities for growth – by showing employers how job quality benefits businesses, linking funding opportunities to job quality, and supporting jobs most exposed to environmental risks.
	6.4.3.4 Strengthen the connection between economic and workforce development efforts through better coordination across state agencies and with regional and local partners in order to support businesses.
6.4.4 Remove barriers to education and job opportunities to grow the clean economy workforce	6.4.4.1 Support communities that have faced environmental and economic inequities through workforce and community programs such as Building Strong Communities, Powerup, and pre- and registered-apprenticeships, and by supporting local, community-led workforce efforts.
	6.4.4.2 Partner with employers, trade associations, labor groups, including unions, nonprofits, workforce boards, and education and training institutions to find and share effective ways to help overlooked workers overcome barriers like lack of transportation or childcare, and to implement solutions such as mentoring, career guidance, learning on the job, and support services to help people succeed at work.

Goal 7 – Efficient and resilient buildings

Build and maintain healthy, comfortable, safe, efficient, and resilient buildings and homes that are cheaper to operate, pollute very little and support grid stability

Initiative 7.1: Decarbonized residential and commercial buildings:

Reduce energy use, carbon emissions, and embodied carbon in buildings and building materials

Sub-initiative	State action steps
7.1.1 Increase energy efficiency in buildings	7.1.1.1 Estimate emissions reductions resulting from energy efficiency programs such as the Energy Conservation Optimization Act and the Natural Gas Innovation Act.
	7.1.1.2 Leverage, consolidate, and streamline programs such as energy assistance, pre-weatherization, weatherization, and utility efficiency programs to make them easier to access, navigate, and scale up.
	7.1.1.3 Leverage existing sustainability programs such as Energy Star, LEED, WELL, Green Communities, and others, which contribute to market demand for carbon-free living and work environments.
	7.1.1.4 Ensure that programs, such as utility energy audit programs, are equitably available across the state regardless of fuel type.
	7.1.1.5 Expand energy benchmarking and other assessment tools for all building types that compare existing performance to target standards to help homeowners and building owners analyze their existing building energy usage and identify best-practice next steps to increase efficiency.
	7.1.1.6 Promote real-time monitoring of building or tenant space energy consumption to facilitate energy consumption reduction and provide immediate feedback to the owner.
	7.1.1.7 Provide education and technical assistance on building energy improvements and energy efficiency, such as grant writing, best practices, and first steps, to owners, developers, design professionals, and the construction workforce.
	7.1.1.8 Target energy efficiency incentives to energy-intensive use types such as health care systems, data centers, cold storage facilities, food serves, and food sales.
	7.1.1.9 Develop financial incentives, including utility rate designs, to support demand response and smart building systems.
	7.1.1.10 Support opportunities for additional financial incentives including loans and rebates for homes, businesses, governments, healthcare systems, schools, and other buildings to increase energy efficiency and reduce energy use.
	7.1.1.11 Research and implement a Building Performance Standard and ensure alignment with building codes.
	7.1.1.12 Update regulatory requirements, including adopting building and energy codes to increase energy efficiency in buildings, including incrementally increasing the Minnesota Commercial Energy Code, Minnesota Residential Energy Code, and regularly adopting updated ASHRAE 90.1 and the International Energy Conservation Code.
	7.1.1.13 Develop statutory criteria to enforce the Minnesota Energy Codes if local municipalities have not adopted the State Building Code for local enforcement as is currently done for the Minnesota Accessibility Code.

Sub-initiative	State action steps
7.1.2 Lower energy use through water conservation in buildings	7.1.2.1 Study and develop new requirements for gray water treatment and use in homes based on scientific data and global best practices.
	7.1.2.2 Communicate the benefits of water conservation best practices to build stakeholder awareness and drive market response.
	7.1.2.3 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support water conservation and use of non-potable water in buildings.
	7.1.2.4 Develop financial incentives to support water conservation and use of non-potable water in buildings.
	7.1.2.5 Update building and energy codes to support water conservation and use of non-potable water in buildings.
7.1.3 Electrify buildings for decarbonization	7.1.3.1 Research and develop very low temperature heat pumps and systems.
	7.1.3.2 Develop and implement ultra-efficient thermal systems, leveraging ground and waste-heat sources and district energy networks.
	7.1.3.3 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the electrification of buildings for decarbonization, including on heat pumps, fuel-switching, and "get ready" practices.
	7.1.3.4 Support and foster refrigeration technician education programs in high schools and community and technical colleges on heat pump technologies, very low temperature heat pump systems, and hybrid energy systems integration to ensure we have a workforce ready to maintain and proliferate net-zero building technologies stock.
	7.1.3.5 Implement a public recognition program for zero-carbon buildings.
	7.1.3.6 Develop financial incentives and rate designs to support the electrification of buildings for decarbonization, such as for very-low- temperature heat pumps and systems, net-zero emissions district energy systems, and deploying multiple approaches to cost reduction.
	7.1.3.7 Adopt building and energy codes to support the electrification of buildings for decarbonization, including regular updates of the Minnesota Building Code, Minnesota Commercial Energy Code, Minnesota Residential Energy Code.
7.1.4 Advance on-site renewable energy	7.1.4.1 Ensure state programs combine energy efficiency design with building siting and design of on-site renewable energy.
	7.1.4.2 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the use of onsite renewable energy, including information about solar-ready design, building infrastructure and space requirements, and mapping tools.
	7.1.4.3 Support and foster electrical technician education programs in high schools and community and technical colleges including low voltage systems, solar systems, energy storage systems, and electrical systems integration controls to support electrification.
	7.1.4.4 Develop financial incentives, including rate designs, to support and incentivize the use of onsite renewable energy.
	7.1.4.5 Adopt building and energy codes to support onsite renewable energy, including incrementally increasing the Minnesota Commercial Energy Code, the Minnesota Residential Energy Code, adopting updated versions of ASHRAE 90.1 and International Energy Conservation Code.

Sub-initiative	State action steps
	7.1.4.6 Develop statewide planning and zoning statutory criteria to provide a basic framework facilitating sustainable development, solar-ready construction, on-site renewable energy, utilization of district energy, and on-site energy storage.
7.1.5 Reduce embodied carbon in buildings	7.1.5.1 Include embodied carbon criteria in state and local government procurement and contracting processes.
	7.1.5.2 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the use of low-carbon construction materials.
	7.1.5.3 Offer financial incentives for construction projects to use low-carbon construction or renewable materials and products.
	7.1.5.4 Adopt building codes to support the use of low-carbon construction materials and products, such as, but not limited to, strawbale, hemp-crete, rammed earth, mycelium, and reused/recycled construction materials.

Initiative 7.2: Resilient residential and commercial buildings

Integrate innovative technologies, building materials, and design methods in buildings to withstand climate impacts

Sub-initiative	State action steps
7.2.1 Strengthen buildings against extreme weather and climate impacts	7.2.1.1 Enable the use of the Guaranteed Energy Savings Program for resilience to multiple climate perils.
	7.2.1.2 Incorporate climate impacts such as extreme heat into hazard mitigation planning for essential community buildings and residential buildings and homes.
	7.2.1.3 Provide education and technical assistance to owners, developers, property managers, design professionals, engineers, and the construction workforce to support the design, engineering, and construction and management of buildings that will be able to withstand extreme weather and climate impacts.
	7.2.1.4 Develop financial incentives to support the design and construction of buildings that will be able to withstand extreme weather and climate impacts.
	7.2.1.5 Adopt building codes to support the design and construction of commercial buildings and homes that will be able to withstand extreme weather and climate impacts, such as heat-safe roofing, flood mitigation systems, and weatherization to prevent exposure to extreme heat and air pollution.
7.2.2 Conserve water in buildings for resilience	7.2.2.1 Communicate the benefits of water conservation to build stakeholder awareness and drive market response.
	7.2.2.2 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the design and construction of buildings that conserve water in buildings for resilience, such as education on best practices and cost effective first steps.
	7.2.2.3 Develop financial incentives to support the design and construction of buildings that conserve water in buildings for resilience.
	7.2.2.4 Adopt building and energy codes to support the design and construction of buildings that conserve water in buildings for resilience, such as point-source electric resistance heating and requiring buildings to collect and treat rainwater for use in irrigation and flushing toilets.
7.2.3 Electrify buildings so residents are resilient in the event of outages	7.2.3.1 Research and develop hybrid HVAC systems such as solar-assisted ground-source heat pumps.
	7.2.3.2 Communicate the benefits of building electrification technologies as well as ground-source heat- pump technologies to build stakeholder awareness and drive market response.
	7.2.3.3 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the electrification of buildings for resilience, such as information on best practices and most cost-effective first steps.
	7.2.3.4 Develop financial incentives to support the electrification of buildings for resilience.
	7.2.3.5 Adopt building and energy codes to support the electrification of buildings for resilience (e.g., regularly adopting updated versions of ASHRAE 90.1 and IECC Residential).
7.2.4 Advance onsite renewable energy with storage for resilience to keep buildings powered in the event of larger outages	7.2.4.1 Research and develop minimum criteria for on-site energy production and energy storage by building use type.
	7.2.4.2 Research the two-way flow of electricity from battery storage and EVs when connected to the grid, including assessing technical viability and monetization of services.
	7.2.4.3 Communicate the benefits of onsite renewable energy production and energy storage technologies as well as ground-source heat pump technologies to build stakeholder awareness and drive market response.

Sub-initiative	State action steps
	7.2.4.4 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to support the use of onsite renewable energy with storage capabilities for resilience, such as information on storage-ready construction, general best practices, and cost-effective first steps.
	7.2.4.5 Support the use of onsite renewable energy with storage capabilities for resilience through the development of financial incentives, including rate designs, to optimize off-peak energy distribution and storage.
	7.2.4.6 Adopt building and energy codes to support onsite renewable energy with storage for resilience, such as requiring on-site energy storage to supply buildings for one day or requiring roof structures to be designed to support solar array installations of sufficient capacity to charge building energy storage systems.
7.2.5 Promote the use of healthy building materials	7.2.5.1 Use purchasing and procurement guidelines to require environmental product declaration (EPD) for building materials, including in state and local governments.
	7.2.5.2 Provide education and technical assistance to owners, developers, design professionals, and the construction workforce to make environmentally preferable selections (e.g. non-toxic, mold-resistant, and durable) for their building materials and products, including appliances such as furnaces, water heaters, and cooktops/ovens.
	7.2.5.3 Develop financial incentives to support the design, construction, and ongoing use of healthy building materials, and green chemicals, and products in homes, businesses and the healthcare sector.
	7.2.5.4 Adopt building and energy codes to support the design and construction of buildings that use healthy building materials and products and provide protection to vulnerable populations from climate hazards such as extreme heat.
	7.2.5.5 Support flexibility in codes for developing new system designs that have sustainable and wellness co-benefits, such as canvas ducts that provide significant noise reduction or standards for effective daylighting of buildings to promote wellness.

Initiative 7.3: Reuse of buildings and building materials

Reduce the need for new construction and new materials to prevent waste and reduce energy and resource use

Sub-initiative	State action steps
7.3.1 Increase adaptive building reuse and continued use	7.3.1.1 Modify B3 and other building rating systems related to carbon accounting to include carbon emitted and loss of embodied energy when demolishing an existing building to make way for a new building.
	7.3.1.2 Develop and codify best practices and considerations for adaptive building reuse and identification of uses that fit individual buildings.
	7.3.1.3 Expand access to building assessment tools and other technical assistance and training to developers, design professionals, and the construction workforce to support structure repair and the adaptive reuse and continued use of existing buildings.
	7.3.1.4 Create new and improve and expand existing tax credit programs to increase access, participation, and use of the programs to incentivize building reuse.
	7.3.1.5 Develop building performance standards to support the reuse of existing buildings and tenant spaces based on size and use.
	7.3.1.6 Adopt building and energy codes to support adaptive reuse and continued use of existing buildings.
7.3.2 Increase building deconstruction and material reuse to avoid demolition of buildings that cannot be reused	7.3.2.1 Research and develop best practices for reusing salvaged materials in new construction and rehabilitation projects.
	7.3.2.2 Expand the use of material conservation and material management plans, establishing targets and guidance to increase material salvage, material reuse, and recycling of materials.
	7.3.2.3 Create a building material diversion and reuse program to provide drop-off locations for building materials and a place for consumers to buy the materials, creating more predictability in the reused material market and reducing risk.
	7.3.2.4 Communicate the benefits of building material reuse to build stakeholder awareness and drive market response.
	7.3.2.5 Provide education and technical assistance to developers, design professionals, material contractors, and the construction workforce for structural repair and to support the partial or full deconstruction of existing buildings rather than demolition.
	7.3.2.6 Develop financial incentives to support the deconstruction of existing buildings and reuse of construction materials in new projects.
	7.3.2.7 Disincentivize demolition by establishing deconstruction standards and requirements.
7.3.3 Decrease construction waste	7.3.3.1 Expand recycling of construction waste that cannot be reused in the construction market, investing in the development and expansion of recycling markets for building materials.