7EPA-R-OAR-CPRGI-23-07
Climate Pollution Reduction Grants Program (CPRG): Implementation Grants General Competition
Application Type: Individual State

Application Title:

State of Illinois: Climate Pollution Reduction Grant Implementation Grant

Geographic Location: State of Illinois
Requested CPRG Funding: $ 430,251,378
April 1, 2023

Applicant: State of Illinois - Illinois Environmental Protection Agency (IEPA)
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Applicable PCAP Reference(s): Illinois Environmental Protection Agency, State of Illinois Priority Climate Action Plan, Website link:
https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/climate/documents/Illinois%20Priority%20Climate%20Action%20Plan.pdf

GHG Reduction Measures:

- **GHG Measure 1. Accelerating Clean & Efficient Building Adoption.** The State willcreate a comprehensive initiative to address key obstacles to equitable achievement of building decarbonization, filling in the gaps to state and federal initiatives. [PCAP Reference: p. 20-37]
- **GHG Measure 2. Deploying Clean Transportation & Freight.** Driving an equity-focused transportation and freight electrification effort to address the State's largest source of GHG emissions and criteria pollutants, focused on environmental justice. [PCAP Reference: p.38-56]
- **GHG Measure 3. Kick-starting Industry Decarbonization.** Addressing the hard-to-decarbonize industrial sector through electrifying thermal processes, expanding clean hydrogen, and supporting use and manufacture of clean materials. [PCAP Reference: p. 57-66]
- **GHG Measure 4. Expanding Climate-Smart Agriculture.** Expanding pilot efforts for soil management to scale, building local market for biomethan utilization, and filling in the gaps on small clean equipment and machinery. [PCAP Reference: p. 67-77]
- **GHG Measure 5. Keeping Clean Power Goals on Track.** Ensuring the state can meet its clean energy and fossil fuel retirement schedules from 2030-2045 to meet its carbon-free power sector goals. [PCAP Reference: p.78-83]

Sector(s): Commercial and residential buildings; transportation; industry; agriculture/natural and working lands; electric power.
Expected Total Cumulative GHG Emission Reductions:
2025-2030: **8,486,463 MTCO2e** 2025-3050: **57,406,778 MTCO2e**
Location(s): State of Illinois (statewide)

WORKPLAN

1. OVERALL PROJECT SUMMARY AND APPROACH

Illinois has been hard at work to address the problem of climate change. The centerpiece of that work is the Climate and Equitable Jobs Act (CEJA), signed into law in 2021, which commits the state to 100% carbon-free power by 2045 while also supporting energy efficiency, electric vehicles, and building electrification, and reforming utility planning and regulation. In addition, Governor Pritzker signed an executive order in 2019 committing the state to the principles of the Paris Climate Agreement. Meeting Illinois' commitment to the Paris Climate Agreement would require cutting emissions about 39% from current levels to 139 MMTCO2e. Before that, Illinois has been implementing emissions reduction measures and supporting clean energy, with the Illinois Renewable Portfolio Standard dating to 2007.

In March 2024 Illinois published its Priority Climate Action Plan (PCAP or Plan) developed by the Illinois Environmental Protection Agency (IEPA) to specifically address the obstacles and challenges in meeting the state's GHG emission reduction targets, co-pollutant targets and goals, and community benefits goals, by targeting gaps in funding for critical pathways to achieve those goals. Illinois' PCAP proposes a path towards broad emissions reductions in every large-emitting sector of the Illinois economy: transportation, buildings, industry, agriculture, and power. The paths were specifically developed in coordination with stakeholders to address the gaps in existing federal and state programs, catalyzing projects to enable them to leverage other sources of funding, and kick-starting scalable and replicable models. Every measure includes three primary components: (1) community-focused and equitable planning processes, (2) a set of new or expanded initiatives to address GHGs co-pollutant emissions, and (3) workforce training and equitable contractor development investments necessary to achieve the initiatives successfully.

The Plan also draws from, and builds upon the work of, many entities in Illinois that have developed their own climate action plans: the City of Chicago, the Chicago metropolitan region, the Illinois Department of Natural Resources (IDNR), and the University of Illinois in both Chicago and Urbana-Champaign.

Despite our progress, there is still much work to be done to meet the goals of the Paris Agreement and CEJA to avoid the worst impacts of climate change. Rising to this challenge will require resources, and extensive collaboration between states, municipalities, and the federal government. Illinois' PCAP and CPRG Implementation Grant proposal will help coordinate and catalyze climate action in communities, homes, and businesses across Illinois, and unlock critical opportunities for climate action that we could not pursue without the support of US EPA Climate Pollution Reduction Grant (CPRG) resources.

a. Description of GHG Reduction Measures

Meeting CPRG goals.

Illinois is requesting CPRG Implementation Grant funding to implement five Priority GHG Reduction Measures included in the PCAP: 1) Clean & Efficient Buildings, 2) Clean Transportation & Freight, 3) Clean Industry, 4) Clean Agriculture, and 5) Clean Power.

Illinois' PCAP prioritized sectors which offered the greatest opportunity to achieve emissions reductions that are viable economically and can deliver meaningful benefits to disadvantaged communities. This application focuses on the PCAP measures that provide highest estimated GHG reductions, co-pollutant reductions, and community benefits, and that require new CPRG support to enable Illinois to implement at scale to provide meaningful results. Based on information gathered during the statewide stakeholder engagement process on obstacles, challenges, and gaps in equitable climate progress, IEPA has created a set of initiatives and tasks within the five Priority GHG Reduction Measures that:

- Make demonstrable progress on climate;
- Prioritize reductions in criteria pollutants, particularly in disadvantaged communities;
- Are not funded through other state, utility, or federal initiatives;
- Can be implemented quickly and without significant legislative or regulatory change;
- Establish replicable models that can support market liftoff; and
- Generate additional community benefits.

Through its 2023-24 stakeholder engagement process, the state identified significant gaps, obstacles, and challenges in achieving Illinois climate goals and emission reduction targets. IEPA developed PCAP measures, tasks and initiatives aimed at addressing these key gaps, obstacles, and challenges, including:

Table 1. Stakeholder-Identified Gaps, Obstacles, And Challenges

GHG Measure 1. Accelerating Clean & Efficient Building Adoption
Efforts to make buildings cleaner and more efficient are being hindered by obstacles such as: ● lack of awareness about programs and incentives to make buildings cleaner and more efficient ● difficulty navigating those programs where people are aware of them ● a shortage of qualified contractors ● customers' difficulty connecting with those contractors, especially in some geographic areas ● a lack of resources to support uptake of lower-emitting building codes.
GHG Measure 2. Deploying Clean Transportation & Freight
There is an urgent need for cleaner, more sustainable transportation that is responsible for 25% of Illinois' overall GHG emissions. ● Investment in clean fleets and freight, with a focus on sub-sectors that typically are underserved in federal and state programs. ● Small and medium-sized freight operators lack capital and time to invest in their part of the logistics chain. ● Heavy-duty freight disproportionately affects environmental justice (EJ) communities through poor air quality resulting from diesel emissions.
GHG Measure 3. Kick-starting Industry Decarbonization
New approaches are needed to address decarbonization of Illinois industry that is responsible for about 18% of Illinois GHG emission, which has proven difficult to decarbonize: ● Industrial facilities, particularly small and medium-sized ones, lack support in understanding efficiency and decarbonization options, leading to little change in sector emissions. ● Electrification of industrial thermal processes is new and uncertain. ● Purchasing authorities need time to evaluate lower-carbon materials prior to large-scale procurement. ● Potential leaks from high global warming gas are prevalent in the states food, agriculture, and other refrigeration industries.
GHG Measure 4. Expanding Climate-Smart Agriculture

12% of Illinois GHG emissions come from agriculture, particularly soil management, and the emission reduction challenges in this sector vastly outstrip available resources.

- Existing demand to deploy low-till and no-till agriculture and cover crop planting well exceed available public and private funding.
- There is no market or incentive for the capturing of biomethane for low-carbon end-uses.
- Co-pollutants from commercial landscaping and small agricultural equipment create harmful health impacts on low-income workers.

GHG Measure 5. Keeping Clean Power Goals on Track

Illinois has extensive programming and policy in place in the power sector. However, there remain obstacles to transition to 100% clean energy, including:

- Illinois's smaller rural cooperative utilities and municipal utilities lack resources to manage the clean energy transition, including to study, analyze, and enter into new agreements for the long-term supply of renewable energy as a successor to current long-term contracts with fossil-fuel generation.
- The State needs to undergo comprehensive energy modeling to ensure it has sufficient clean energy resources to proceed with the closure of the worst emitting resources in line with CEJA's power sector decarbonization goals.

Overall Anticipated Timing and Milestones

Proposed tasks and initiatives within the five measures will build on existing Illinois infrastructure to implement and execute quickly. The proposed initiatives will require no statutory change and limited regulatory intervention. The State expects it could launch all these initiatives by 2026, with measurable metrics and GHG emissions reductions able to be reported in the subsequent period.

Overall Assumptions

For all measures, Illinois assumes that funding is awarded by January 1, 2025, federal tax credits and rebate programs under the Inflation Reduction Act are preserved, and the State is successful in securing funding under US EPA's Greenhouse Gas Reduction Fund Solar for All Competition.

Demonstration of Funding Need Approach

The tasks and initiatives within this proposal's five selected measures are designed to fill gaps in existing federal and state programs, launch new pilots and initiatives that can be scaled if successful, and enable projects to access other sources of funding without duplication. A detailed description of how the tasks and measures supplement, rather than supplant, other funding sources is provided for each measure.

Identified Risks and Mitigation

Each of the proposal's five selected measures faces a common risk: delay. To mitigate against funding, hiring, or other delays, all programs will begin in Q1 2026. This will allow a 12 month planning period in which to hire and onboard needed staff, coordinate program rollouts, assess supply chains, find alternative sources of funding, if needed, and develop contingency plans for other risks that develop. For some measures, delay is the only major identified risk and so is not repeated below. However, additional risks and mitigation efforts are described in the measure descriptions below, as applicable.

Key Tasks and Features

GHG Measure 1. Accelerating Clean & Efficient Building Adoption (PCAP pp.20-37)

Approach and Major Features: In pursuing this measure, Illinois proposes strategies aimed to:

- **Fill gaps and leverage existing funds to ensure identified clean building projects get done.** Filling gaps in state and federal efficiency and electrification efforts by providing strategic, targeted financial support leveraging existing funding and program infrastructure and enables projects that would have failed but for additional support, particularly projects in low-income households which experience high rates of "walk-aways" from projects that residents want.
- **Connect more customers with clean building opportunities and ease the process of completing them.** Reducing administrative burdens for customers by helping them navigate programs, incentives, and qualified contractors; and increasing awareness about energy efficiency and electrification opportunities and incentives, particularly among vulnerable communities and building classes with high opportunities for decarbonization measures.
- **Prepare more contractors to do clean buildings work, and ensure customers can find them.** Expanding workforce and contractor training and capacity to implement efficiency and electrification measures and supporting customers in connecting with contractors qualified to perform these measures, which today is difficult and impedes uptake of these measures.
- **Adopt building codes to support efficiency and decarbonization.** Supporting implementation of energy-efficient and low-carbon building codes, which can achieve significant, cost-effective emissions and cost savings but may be impeded by the difficulty of initial implementation.

Tasks: Illinois proposes to implement the following initiatives as discussed in the PCAP:

1.1 Establish a Clean Building Gap Closing and Incentive Stacking Catalyst Fund (PCAP at pp.24-26): IEPA and Illinois Climate Bank (ICB) will expand their residential grant program offerings, which currently include funding for energy efficiency, electrification, enabling upgrades, and energy storage rebates, to include additional program categories:

- **$12,000/home max Whole-Building Electrification incentive** to cover the remaining gaps in decarbonization measures after existing state and federal incentives for low income residents.
- **5-10yr Low-cost Equitable Financing Bridge Loans** for residential/small commercial decarbonization investments, offered at the point of sale of contractor and outreach engagement with households, to cover financial gaps with rebates and other grants.

1.2 Establish a Clean Building Navigator program providing consumer outreach and clean building project support (PCAP at pp.26-28): Illinois Department of Commerce and Economic Opportunity (DCEO) will develop a Navigator program to educate residential customers about efficiency and home electrification; support them in identifying projects, contractors, and incentives; and coordinate clean energy services across currently uncoordinated program and incentive streams. The program would support customers in connecting with various relevant existing state, federal and utility EE, retrofits, electrification and weatherization and distributed energy incentive programs. IEPA and ICB will work with the Illinois Power Agency (IPA) to coordinate education, outreach, and coordination for energy efficiency, solar energy, and electrification.

1.3 Clean Buildings Access Portal (PCAP at pp.28-29): DCEO will work with IEPA, ICB and IPA to develop and launch the portal, connecting the agencies' initiatives.

1.4 Clean Buildings Contractor Training (PCAP at pp.29-30): DCEO will expand their Clean Jobs Workforce Network Program and Clean Energy Contractor Incubator Program to focus on specific communities and to include new technology and service areas as described.

1.5 Large Building Owner Outreach and Clean Buildings Concierge (PCAP pp.30-32): This initiative will provide technical assistance to mid-sized commercial buildings in areas not served by existing utility programs. DCEO will engage with third-party contractors to lead the effort, in coordination with the utilities administering the statewide energy efficiency programs.

1.6 Community Geothermal Planning + Pilots (PCAP pp.33-34): ICB will conduct a competitive grant solicitation for Community Geothermal projects and will develop a loan program offering.

1.7 Accelerate Stretch Building Code Adoption by Local Governments (PCAP pp.34-35): ICB will make available grants to local governments through an open process, in a manner similar to the upcoming grant program for local governments to adopt SolarAPP+.

Demonstration of Funding Need: This measure fills five gaps in available funding to ensure resident uptake and maximize use of other federal and non-federal funding streams. The proposed programs (1) fill gaps in available financing for comprehensive energy and electrification projects, (2) supply technical assistance, marketing, and tools to help contractors braid funding sources, (3) lay the groundwork for moving entire neighborhoods to geothermal heat, (4) strengthen the contractor workforce needed to sell and install comprehensive retrofits and electrification, and (5) assist municipalities in adopting Illinois' stretch energy code. These programs leverage all other available funds and incentives, including:

- Utilities: utility energy efficiency and building electrification programs;
- Illinois DCEO: the Clean Jobs Workforce Network Program and Contractor Incubator Program, Illinois Home Weatherization Assistance Program (IHWAP), State Supplemental Low Income Energy Assistance Fund (LIHEAP), Energy Transition Navigator Program, and contractor efficiency and electrification certification programs;
- Illinois EPA: Home Efficiency Rebates, Home Electrification and Appliance Rebates, Energy Code Training and Technical Support, Energy Efficiency Trust Fund Grant Program, Energy Efficiency and Conservation Block Grants, and energy efficiency measures for public water infrastructure;
- Illinois Climate Bank: the Energy Efficiency Revolving Loan Fund, State Small Business Climate Initiative, Commercial Property Assessed Clean Energy, Various climate finance products, Solar for All Enabling Upgrades Grant Program, Solar for All Energy Storage Grant Program;
- and other federal funding sources such as tax credits.

Transformative Impact:

- **Market Transformation:** The proposed Clean Buildings programs will fill gaps among existing and expected incentives, financing, outreach, and technical assistance programs to significantly expand adoption. The proposed contractor training initiative would transform Illinois' market by building a skilled, flexible workforce that can join energy efficiency, solar and geothermal energy, storage, and building electrification in a varied, older building stock. The proposal to support adoption of Illinois' stretch energy code would increase deployment of emission reduction technologies in new buildings, while the Navigator, Access Portal, and Large Building Concierge initiatives would ease adoption and implementation of projects, increasing their deployment.
- **Replicable and Scalable Models:** The community geothermal planning and pilot effort will create a national model for addressing GHG emissions in dense urban environments and cold climates at the neighborhood level.

Key Assumptions: A key assumption is that a variety of utility, state, and federally funded clean energy incentives and financing mechanisms will become or continue to be available, so that this measure helps residents and businesses turn these funding streams into complete projects.

Identified Risks and Mitigation: Please see the discussion of delay risk above.

GHG Measure 2. Deploying Clean Transportation & Freight (PCAP pp.38-56)

Approach and Major Features: In pursuing this measure, Illinois proposes strategies aimed to:

- **Support adoption of zero-emission light commercial, medium- and heavy-duty electric vehicles**, with the goal of reaching 30% of new sales by 2030, 60% by 2035, 65% by 2040, and 80% by 2050. Pursuing this measure will include strategies such as incentives for the purchase of vehicles, programmatic or financial support for charging infrastructure, workforce and operator training and development, outreach and planning efforts, and programs or rates to encourage smart charging, EV-to-grid technologies, or EVs as a distributed energy resource.
- **Support adoption of passenger electric vehicles**, with the goal of reaching 55% of new sales by 2030, 90% by 2040, and 95% by 2050. Pursuing this measure will include strategies such as incentives for the purchase of vehicles, shared mobility programs, programmatic or financial support for charging infrastructure, and programs or rates to encourage smart charging, EV-to-grid technologies, or EVs as a distributed energy resource.

Tasks: Illinois proposes to implement the following initiatives as discussed in the PCAP:

2.1 Create a Heavy Duty Vehicle Charging Infrastructure Program for Small and Medium Fleet Operators (PCAP at pp.41-42): IEPA will leverage its authority under its existing Charging Infrastructure Grant Program to expand a medium- and heavy-duty vehicle charging infrastructure grant program. ICB is working to establish a low-cost loan program for EV charging infrastructure that can be accessed by fleet and freight operators.

2.2 Support Deployment of Trackside Power to Reduce Diesel Engine Idling (PCAP at pp. 42-44): IEPA will leverage its authority under its existing Charging Infrastructure Grant Program and Rail Freight Program to issue grants for trackside power in a select number of higher-than-average traffic locomotive hubs.

2.3 Support Zero-Emissions On-Road and Off-Road Vehicle Deployment for Small and Medium Fleet Operators (PCAP at pp.45-47): IEPA will leverage existing authority under Driving a Cleaner Illinois, the grant program developed to distribute funding for mobile source electrification projects. ICB will work to create a low-cost loan program for medium- and heavy-duty fleet vehicles.

2.4 Create a Clean Fleet and Freight Concierge (PCAP at pp.47-49): IEPA will conduct a solicitation for a third-party implementer to serve as a clean freight concierge.

2.5 Create a Freight Hub Data Collection and Analysis Program Emphasizing Monitoring and Metrics in Local Communities (PCAP at pp.49-50): IEPA will expand its Ambient Air Monitoring Network Plan to include air quality monitoring sites in targeted EJ communities.

2.6 Develop Workforce Training for Fleet and Freight Operators and Heavy-Duty Charging Infrastructure Maintenance (PCAP at pp.50-53): IEPA will work with DCEO to leverage and expand the capacity of Illinois' developing Clean Jobs Workforce Network Program to include workforce training for fleet and freight operations and for heavy-duty charging infrastructure maintenance.

2.7 Facilitate Statewide and Interagency Coordination Around Critical Freight Planning and Engagement (PCAP at pp.54-55): IEPA will establish an interagency working group to coordinate and begin to work with community-based organizations to address known barriers.

Demonstration of Funding Need: The clean freight measure addresses gaps in existing federal and state programs to reduce greenhouse gas emissions in the freight and transportation sector. These initiatives complement existing programs, encouraging recipients to leverage available resources to expedite adoption and create transformative impacts. The state has conducted a comprehensive analysis of current federal and state programs, including those by the IEPA, Illinois Department of Transportation, and other initiatives. Despite opportunities like federal tax incentives, some operators remain ineligible, creating a barrier to adoption.

Transformative Impact

- **Hard-to-Abate Sector:** Illinois' targeted approach to the challenging freight sector involves bringing trackside power to specific locomotive hubs, and reducing GHG emissions in busy freight ports. This transformation seeks to enhance the deployment of heavy-duty chargers, addressing challenges in their availability, particularly in local community sub-sectors overlooked by the New Energy Vehicle Infrastructure program.
- **Market Transformation:** Workforce training initiatives focus on charger maintenance and optimizing driving practices for electrified trucks, transforming job opportunities and capabilities.
- **Replicable and Scalable Models:** The proposed model emphasizes replicability and scalability, underlining the importance of interagency coordination, community, and EJ involvement in freight decarbonization—a traditionally neglected area. Overcoming known barriers like interconnection and supply chain issues faced by all states positions the model as a solution applicable elsewhere. The "Clean Freight Concierge" concept is a replicable model, fostering collaboration for statewide success in freight decarbonization initiatives.

Key Assumptions: Our key assumption is that a variety of existing and pending utility, state, and federal EV charging and EV purchase rebates and financing mechanisms will become or continue to be available and will create a favorable environment to reduce range anxiety, provide positive examples of early adopters and make the transition to EV more affordable and understandable in the areas not covered by this proposal. We also expect the EV charging and vehicle manufacturers to have the vehicles and EV charging components available for purchase within the project's timelines.

Identified Risks and Mitigation: The greatest risk, in addition to delay, discussed above, is the availability of skilled qualified contractors/consultants to bid into the state's project RFPs. The 12 month planning period will allow the state to reissue or update RFPs, if needed, to mitigate against this risk.

GHG Measure 3. Kick-starting Industry Decarbonization (PCAP pp.57-66)

Approach and Major Features: In pursuing this measure, Illinois proposes strategies aimed to:

- **Improve industrial efficiency**, with the goal of 5% by 2030 and 25% by 2050, and support implementation of process improvements. Industrial efficiency is the most cost-effective and readily available measure to reduce emissions from the industrial sector. By building upon existing state and federal programs and leveraging existing relationships with industrial operations, Illinois could accelerate the pace of industrial efficiency improvements.
- **Electrify low-temperature industrial heat**, with the goal of 10% by 2030 and 95% by 2050. Low-temperature industrial heating is one of the greatest opportunities for GHG emissions reductions in the industrial sector. Electric technologies such as industrial heat pumps are technically capable of filling this role in nearly all cases. Federal tax credits, combined with state programs to support uptake by businesses, could bring these technologies into cost parity or cost advantage compared to gas-fired industrial equipment.
- **Convert medium- and high-temperature industrial heat in targeted sectors to electricity or hydrogen**, with the goal of 30% by 2050. Developing markets, programs, know-how, and economies of scale for high-heat industrial processes will be essential for reducing Illinois' emissions to levels needed to meet Paris Climate Agreement commitments. Given its relatively low-cost and low-carbon electricity, the presence of a DOE hydrogen hub, and its industrial base, Illinois is a strong place to pioneer measures to be scaled and replicated elsewhere.

- **Reduce emissions of hyper-potent fluorinated gases**, primarily through substitution of lower-warming-potential alternatives, supported by improved disposal, equipment and maintenance, with the goal of 20% reduction by 2030 and 67% by 2050. There are readily available lower-potency gases that can replace fluorinated gases (or "f-gases") in many use cases, and their incredible potency allows for rapid near-term reductions, a CPRG priority.

Tasks: Illinois proposes to implement the following initiatives as discussed in the PCAP:

3.1 Clean Industry Concierge (PCAP at pp.60-61): IEPA will conduct a solicitation for a third-party clean industry concierge to help Illinois industrial facilities navigate, coordinate and access funding opportunities, get support in designing and implementing decarbonization measures, and provide strong guidance on industry best practices in efficient and cost-effective low-carbon technologies and processes. The Clean Industry Concierge will provide the following support:

- **Contractor and Supply Chain Connections and Education**. Establish networks between manufacturers and contractors and suppliers working with lower-carbon materials and products. Provide contractors and suppliers with tools and resources to better understand benefits and incentives available to manufacturers in Illinois, ensuring they can amplify the impact of the concierge services on their manufacturing customers.
- **Strategic Planning Support**. Acting as the main point of contact for manufacturers, the concierge will disseminate information about programs, incentives, and opportunities for decarbonization, ensuring that companies are well-informed and able to take full advantage of available resources.
- **Workforce Training Liaison**. Creating a feedback loop with workforce training programs to identify and address skill gaps, ensuring the workforce is equipped to support the transition to cleaner manufacturing processes and practices.
- **Clean Industry Planning and Stakeholder Engagement**. Facilitating communication between manufacturers and stakeholders, including communities and partnership organizations, to promote comprehensive support and engagement in decarbonization.

3.2 Fluorinated Gas Reduction Program (PCAP at p.63): IEPA will develop an incentive program to support the substitution of F-gases with lower carbon alternatives.

Demonstration of Funding Need: There is a lack of federal or state funds to address any of the programs or initiatives identified in the Clean Industry measure. To address this gap, CPRG funds are needed to facilitate these initiatives. The Clean Industry concierge will enhance the Illinois DCEO Workforce Development Program and ensure resources are leveraged effectively, avoiding duplication.

Transformative Impact

- **Hard-to-Abate Sector:** This initiative addresses challenges within the hard-to-abate industrial sector by targeting small and medium-sized industrial facilities that lack the scale, resources, and time to explore and test low-carbon options and processes. The F-gas reduction program focuses on the industrial food and beverage sector, particularly supermarket refrigeration systems.
- **Replicable and Scalable Models:** The proposed Clean Industry Concierge envisions a replicable approach for multi-program initiatives that connect planning with the workforce and operators, fostering a collaborative environment for statewide success in sustainable industrial practices.

Key Assumptions: A key assumption is that a variety of existing and pending utility, state, and federal rebates and financing mechanisms will become or continue to be available to support industry decarbonization and provide positive examples of early adopters and create complimenting resources to fill the gaps to make industrial decarbonization more affordable and understandable in the areas not

covered by this proposal. We also anticipate that enough innovative projects and processes will be available to participate in the project within the anticipated timelines.

Identified Risks and Mitigation: The greatest risk, aside from delay, discussed above, is a lack of interest or readiness from industry to participate within the project timelines. The 12 month planning period will allow the State to adjust outreach to mitigate this risk.

GHG Measure 4. Expanding Climate-Smart Agriculture (PCAP pp.67-77)

Approach and Major Features: In pursuing this measure, Illinois proposes strategies aiming to:

- **Reduce agricultural process and land-use emissions** using no-till and low-till agriculture, cover crops, and other measures, with the goal of 2% reduction by 2030 and 10% by 2050.
- **Reduce total combined emissions from wastewater, landfills, and livestock**, through approaches such as methane capture and utilization, anaerobic digestion, and others, focusing on approaches that are most cost-effective and offer the most added benefits, with the goal of 10% reduction by 2050.
- **Reduce GHG emissions from lawn equipment and other small engines** by accelerating the shift from gas-powered to electric-powered lawn equipment with a focus on heavily used tools in professional landscaping, with the goal of shifting 40% of new sales to all-electric equipment by 2030 and 99% by 2035.

Tasks: Illinois proposes to implement the following initiatives as discussed in the PCAP:

4.1 Expanding Deployment and Improving Efficiency of Low-Till, No-Till, and Cover Crop Practices (PCAP at pp.70-72): IEPA will work with IDOA to expand its "Fall Covers for Spring Savings" program to create new tools and resources. This initiative significantly expands the acreage under the current Illinois Cover Crop Program and creates pathways for various lands to participate in no-till practices.

4.2 Biomethane Emissions Reduction, Capture, and Utilization in High-Value End Uses (PCAP at pp.72-74): IEPA will develop a competitive grant program for community-based projects to coordinate distributed biomethane utilization systems.

4.3 Accelerating Clean Landscaping and Small Engine Equipment (PCAP at pp.75-76): IEPA will develop a rebate program for all-electric landscaping equipment.

Demonstration of Funding Need: The clean agriculture initiative addresses significant gaps in current federal and state programs and rapidly accelerates the deployment of solutions to reduce greenhouse gas emissions in the agriculture sector. Expanding the existing Illinois Department of Agriculture "Fall Covers for Spring Savings" meets demand that far exceeds the program's current capacity by rapidly enrolling new acreage in the program. Absent the CPRG funding this program will not meet the demand. The biomethane initiative complements existing efforts, notably the EPA and DOE Methane Emissions Reduction program, which has provided the IDNR with $17.4 million. This initiative targets agricultural manure production, filling critical gaps by addressing segments not covered by existing funding.

Transformative Impact

- **Replicable and Scalable Models:** The No-till program and cover crop initiative target non-participating lands with significant potential for scale and demand. The cover crop program, proven successful, serves as a replicable model poised to scale up. Statewide 2022 data from the USDA National Agricultural Statistics Service highlights the substantial acreage of conventional and no-till lands (Conventional tilled acres - 5,912,002, No-Till or Conservation Tilled acres - 15,331,358), emphasizing the scope for impact.

- **Market Transformation:** Biomethane efforts focus on creating localized markets and supply chains, testing new models and technologies to cater to high-value end uses that aid in decarbonizing hard-to-abate sectors.

Key Assumptions: A key assumption is that a variety of existing and pending utility, state, and federal rebates and financing mechanisms will become or continue to be available to support agriculture decarbonization and provide positive examples of early adopters and create complimenting resources to fill the gaps to make agricultural decarbonization more affordable and understandable in the areas not covered by this proposal. We also anticipate that enough projects will be available to participate in the project within the anticipated timelines.

Identified Risks and Mitigation: The greatest risk, aside from delay, discussed above, is a lack of interest or readiness from the intended beneficiaries to participate within the project timelines. The 12 month planning period will allow the state to adjust outreach to address this risk, if needed.

GHG Measure 5. Keeping Clean Power Goals on Track (PCAP pp.78-83)

Approach and Major Features: In pursuing this measure, Illinois proposes strategies including, but not limited to:

- **Support comprehensive energy modeling** to enable Illinois to identify pressing needs during its transition to 100% clean energy, considering economic, environmental, and social factors.
- **Support municipal and co-op utilities transition to renewable energy**. The state will work with municipal and co-op utilities in Illinois to help them identify a path to transition the state's power sector to carbon-free by 2045. The state will provide technical and financial support in assessing needs and identifying ways to replace fossil fuel resources with renewable energy.

Tasks: Illinois proposes to implement the following initiatives as discussed in the PCAP:

5.1 Statewide Clean Energy Modeling (PCAP at pp.80-81): IEPA will work with IPA to conduct a modeling exercise to identify alternative scenarios under which the state can meet resource adequacy needs while keeping the CEJA decarbonization schedule on track.

5.2 Small Utility Clean Energy Planning Support (PCAP at pp.81-82): ICB will develop a technical assistance resource, and make strategic planning grants, to help eligible municipal and co-op utilities assess needs and identify ways to replace fossil fuels with renewable energy.

Demonstration of Funding Need: Illinois requests funding to support comprehensive clean energy modeling efforts that do not have other funding sources. This will close a major gap in Illinois' ability to develop a strategic long-term approach to phasing out fossil generation and maximizing clean energy initiatives and policies. This modeling is not available from the large Illinois utilities or regional transmission operators, who conduct only limited modeling of expected near-term plant retirements, not allowing for any long-term planning. There is no funding currently available to Illinois' smaller utilities to help them move away from long-term supply contracts for fossil generation and enter into new long-term renewables agreements, hampering Illinois' ability to CEJA and Paris Agreement goals. The State is in the process of applying for US DOE Grid Resilience and Innovative Partnerships (GRIP) funding to support small utilities to integrate demand response programs and improve energy data management and sharing, but which does not include the kind of support requested here.

Transformative Impact:

- **Replicable and Scalable Models.** The proposed support for smaller utilities in Illinois to transition from fossil-fuel power procurement contracts to long-term renewable supply agreements will create a replicable model to be used by other states seeking to engage small rural co-ops and municipal electric utilities that lack resources in planning to shift them off their existing fossil fuel plants and contracts and enter into new long-term agreements for clean energy.

Key Assumptions: A key assumption is that a variety of existing and pending utility, state, and federal rebates and financing mechanisms will become or continue to be available to support small utility energy transition and make it more affordable and understandable in the areas not covered by this proposal. A key assumption is that enough consultants and small utilities will be available to participate in the competitive solicitations for energy modeling and project solicitations for small utility planning to participate within the anticipated project timelines.

Identified Risks and Mitigation: The greatest risk, besides delay, discussed above, is the availability of qualified consultants to perform comprehensive energy modeling and availability of data needed for the power sector modeling. The 12 month planning period will allow time to adjust RFPs, if needed, and negotiate data sharing agreements to mitigate this risk.

2. IMPACT OF GHG REDUCTION MEASURES

Illinois' estimated annual greenhouse gas emissions today are 228 MMTCO2e, with transportation (60 MMTCO2e) accounting for the largest share, followed by power (52 MMTCO2e). This represents a nearly 20% decline from 2005's emissions of 283.6 MMTCO2e. Power was the largest emitting sector in 2005 with 94 MMTCO2e, and saw the biggest decline of any sector between 2005 and 2021. The second-largest source of emissions in 2005 was transportation (72 MMTCO2e). Governor Pritzker signed an executive order in 2019 committing the state to the Paris Climate Agreement's principles. Meeting that commitment will require cutting emissions about 39% from current levels to 139 MMTCO2e.

a. Magnitude of GHG Reductions from 2025 through 2030

Table 2. GHG Reductions 2025-2030, metric tons CO2e

Initiative	GHG Emission Reduction (mt CO2e)	Appendix C Reference
GHG Measure 1. Accelerating Clean & Efficient Building Adoption		
Task 1.1 Clean Building Catalyst Fund Task 1.2 Clean Building Navigator Consumer Outreach Program Task 1.3 Clean Buildings Access Portal	151,758	Pg. 1-2
Task 1.4 Clean Buildings Contractor Training	3,121,000	Pg. 3
Task 1.5 Large Building Outreach & Clean Buildings Concierge	1,698	Pg. 2
Task 1.6 Community Geothermal Planning + Pilots	15,099	Pg. 3
Task 1.7 Stretch Building Code Adoption	438,355	Pg. 3-4
GHG Measure 2. Deploying Clean Transportation & Freight		

Task 2.1 Heavy Duty Vehicle Charging Task 2.3 Zero-Emissions On-Road and Off-Road Vehicles Task 2.4 Clean Fleet and Freight Concierge Task 2.6 Fleet/Freight Operation & Heavy-Duty Charging Workforce Training Task 2.7 Critical Freight Planning	Heavy Duty: 56,677 Medium Duty: 7,383 HD Chargers: 27,238 ORV: 36,807	Pg. 4-5 Pg. 5 Pg. 5 Pg. 5-6
Task 2.2 Trackside Power Task 2.5 Freight Hub Data Task 2.7 Critical Freight Planning	9,219	Pg. 6
GHG Measure 3. Kick-starting Industry Decarbonization		
Task 3.1 Clean Industry Concierge	251,940	Pg. 6-7
Task 3.2 Fluorinated Gas Reduction Program	1,699,356	Pg. 7
GHG Measure 4. Expanding Climate-Smart Agriculture		
Task 4.1 Low-Till, No-Till, and Cover Crop Practices	896,677	Pg. 7-8
Task 4.2 Biomethane Emissions	1,182,265	Pg. 9
Task 4.3 Clean Landscaping and Small Engine Equipment	169,064	Pg. 8-9
GHG Measure 5. Keeping Clean Power Goals on Track		
Task 5.1 Statewide Clean Energy Modeling	181,188	Pg.9-10
Task 5.2 Small Utility Clean Energy Planning Support	287,803	Pg. 10
TOTAL	**8,468,463**	

b. Magnitude of GHG Reductions from 2025 through 2050

Table 3. GHG Reductions 2025-2050, metric tons CO2e

2050 Strategy	GHG Emission Reduction (mt CO2e)	Appendix C Reference
GHG Measure 1. Accelerating Clean & Efficient Building Adoption		
Task 1.1 Clean Building Catalyst Fund Task 1.2 Clean Building Navigator Consumer Outreach Program Task 1.3 Clean Buildings Access Portal	1,250,171	Pg. 1-2
Task 1.4 Clean Buildings Contractor Training	26,486,000	Pg. 2-3
Task 1.5 Large Building Outreach & Clean Buildings Concierge	13,015	Pg. 2
Task 1.6 Community Geothermal Planning + Pilots	128,562	Pg. 3
Task 1.7 Stretch Building Code Adoption	3,508,556	Pg. 3-4
GHG Measure 2. Deploying Clean Transportation & Freight		
Task 2.1 Heavy Duty Vehicle Charging Task 2.3 Zero-Emissions On-Road and Off-Road Vehicles Task 2.4 Clean Fleet and Freight Concierge Task 2.6 Fleet/Freight Operation & Heavy-Duty Charging Workforce Training Task 2.7 Critical Freight Planning	Heavy Duty: 402,536 Medium Duty: 50,810 HD Chargers: 185,474 ORV: 274,557	Pg. 4-5 Pg. 5 Pg. 5 Pg. 5-6
Task 2.2 Trackside Power	55,311	Pg. 6

Task 2.5 Freight Hub Data Task 2.7 Critical Freight Planning		
GHG Measure 3. Kick-starting Industry Decarbonization		
Task 3.1 Clean Industry Concierge	1,931,549	Pg. 6-7
Task 3.2 Fluorinated Gas Reduction Program	13,028,400	Pg. 7
GHG Measure 4. Expanding Climate-Smart Agriculture		
Task 4.1 Low-Till, No-Till, and Cover Crop Practices	896,677	Pg. 7-8
Task 4.2 Biomethane Emissions	5,911,323	Pg. 9
Task 4.3 Clean Landscaping and Small Engine Equipment	845,320	Pg. 8-9
GHG Measure 5. Keeping Clean Power Goals on Track		
Task 5.1 Statewide Clean Energy Modeling	233,065	Pg.9-10
Task 5.2 Small Utility Clean Energy Planning Support	2,128,205	Pg. 10
TOTAL	**57,406,778**	

c. Cost Effectiveness of GHG Reductions

Table 4. Cost-Effectiveness

	GHG Emission Reduction		$/Ton CO2e	
	2025-2030	**2025-2050**	**2025-2030**	**2025-2050**
GHG Measure 1. Accelerating Clean & Efficient Building Adoption	3,730,198	31,404,616	$46.14	$5.48
GHG Measure 2. Deploying Clean Transportation & Freight	155,598	1,095,257	$741.74	$105.37
GHG Measure 3. Kick-starting Industry Decarbonization	1,951,296	14,959,940	$12.74	$1.66
GHG Measure 4. Expanding Climate-Smart Agriculture	2,180,380	7,585,695	$51.24	$14.73
GHG Measure 5. Keeping Clean Power Goals on Track	468,991	2,361,270	$13.48	$2.68
Total	8,468,463	57,406,778	$50.72	$7.50

d. Documentation of GHG Reduction Assumptions

See Appendix C to this Work Plan for detailed documentation of GHG reduction assumptions. Also, see the Compiled GHG Methodology Narrative and spreadsheets filed with this application.

3. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

Through its PCAP process, the State took a strategic approach to identifying gaps in GHG emissions reduction efforts and pathways, and focused its PCAP and this implementation grant proposal on an output and outcomes-based approach to achieving its program goals. For each measure, the State has adopted the following framework: Tasks to address gaps >> Performance Measures & Outputs to track progress >> Outcomes (GHG Reductions) to measure impact.

The State will track performance measures across all tasks (as applicable): Jobs created, new businesses started by equity eligible persons, energy burden reduction, and locational criteria pollution reduction.

Performance measurement will be incorporated into each initiative for each measure, tracked quarterly and annually (as applicable), with a final report identifying overall outcomes. The State expects it could launch all these initiatives by 2026, with measurable metrics and GHG emissions reductions able to be reported for the subsequent period.

Table 5. Performance Measures, Outputs And Outcomes

Measure/Tasks	Performance Measure & Output	GHG Reduction, MTCO2e, 2025-2030	Reporting years
GHG Measure 1. Accelerating Clean & Efficient Building Adoption			
Task 1.1 Clean Building Catalyst Fund Task 1.2 Clean Building Navigator Program Task 1.3 Clean Buildings Access Portal Task 1.4 Clean Buildings Contractor Training Task 1.5 Large Building Outreach & Clean Buildings Concierge	Retrofit 12,649 single- and multi-family residential housing units	151,758	2027 - 2030
	Retrofit 2.36 million sq.ft. commercial space	1,698	2027 - 2030
	Train 52 new equity eligible persons in building decarbonization and support development of 26 new building decarbonization contractors in target communities each year	3,121,000	2027 - 2030
Task 1.6 Community Geothermal Planning + Pilots	Deploy community geothermal to serve 1,100 households	15,099	2027 - 2030
Task 1.7 Stretch Building Code Adoption	90 municipalities adopt the Illinois Stretch Energy Code	438,355	2027 - 2030
GHG Measure 2. Deploying Clean Transportation & Freight			
Task 2.1 Heavy Duty Vehicle Charging Task 2.3 Zero Emission Vehicles Task 2.4 Clean Fleet and Freight Concierge Task 2.6 Fleet/Freight Operation & Heavy-Duty Charging Workforce Training Task 2.7 Critical Freight Planning	Replace 402 heavy duty diesel vehicles with electric vehicles and chargers, via grants and loans.	56,667	2027 - 2030
	Replace 240 medium duty diesel vehicles with electric vehicles and chargers, via grants and loans.	7,383	2027-2030
	761 additional heavy duty vehicle chargers that are not paired with a new vehicle.	27,238	2027-2030
	Replace 1075 off-road diesel vehicles (forklifts) with electric vehicles.	36,807	2027-2030

Task 2.2 Trackside Power Task 2.7 Critical Freight Planning	Deploy 5-7 new trackside power supply systems at high-traffic train stations.	9,219	2027 - 2030
Task 2.5 Freight Hub Data	Deploy 2,000 indoor air quality monitors Install 6 state of the art air quality monitor stations at high traffic freight hubs	-	2027 - 2030
GHG Measure 3. Kick-starting Industry Decarbonization			
Task 3.1 Clean Industry Concierge	Support retrofit of 10 industrial facilities	251,940	2027 - 2030
Task 3.2 Fluorinated Gas Reduction Program	Replace 390 refrigerant systems	1,699,356	2027 - 2030
GHG Measure 4. Expanding Climate-Smart Agriculture			
Task 4.1 Low-Till, No-Till, and Cover Crop Practices	Add 230,702 acres of cover crops planted to existing programs and convert 324,000 acres to no-till agriculture	896,677	2027 - 2030
Task 4.2 Biomethane Emissions	Fund biomethane projects using approximately 5 million tons of solid waste	1,182,265	2027 - 2030
Task 4.3 Clean Landscaping and Small Engine Equipment	Recycle and replace 45,734 pieces of small commercial landscaping equipment with all electric	169,064	2027 - 2030
GHG Measure 5. Keeping Clean Power Goals on Track			
Task 5.1 Clean Energy Modeling	Statewide clean energy modeling study	181,188	2027 - 2030
Task 5.2 Small Utility Clean Energy Planning Support	2 utilities per year undergo planning	287,803	2027 - 2030

Authorities, Implementation Timeline, and Milestones

Proposed tasks and initiatives within the five measures will build on existing infrastructure within Illinois to implement and execute quickly. Establishment of proposed initiatives will require no statutory change, and limited regulatory intervention. Many Illinois agencies, including IEPA, IDOA, and IDNR have existing authority under the Grant Accountability and Transparency Act and complementary rules to uniformly implement competitive grant and incentive programs utilizing state and federal pass-through funds ("Grantmaking Authority").

Table 6. Implementing Authority and Milestones

Task	Agency	Key Activity / Deliverable	Existing Authority	Key Milestone(s)
GHG Measure 1. Accelerating Clean & Efficient Building Adoption				
Task 1.1 Clean Building Catalyst Fund	IEPA	Expand existing grant programs	Yes	Launch 2026, Q1
	IFA/ICB	Launch new loan programs	Yes	Launch 2026, Q1
Task 1.2 Clean Building Navigator Consumer Outreach Program	DCEO	Competitive procurement of program administrator and launch new grassroot and community-based organizations grant program	Yes	Launch 2026, Q1
Task 1.3 Clean Buildings Access Portal	DCEO	Competitive procurement of services to develop and maintain contractor portal	Yes	Launch 2026, Q1

Task 1.4 Clean Buildings Contractor Training	DCEO	Expand existing Clean Jobs Workforce Network and Clean Energy Contractor Incubator programs	Yes	Launch 2026, Q1
Task 1.5 Large Building Outreach & Clean Buildings Concierge	IEPA	Competitive procurement of program administrator	Yes	Launch 2026, Q1
Task 1.6 Community Geothermal Planning + Pilots	IFA/ICB	Launch competitive RFP for Community Geothermal projects	Yes	Launch 2026, Q1
Task 1.7 Stretch Building Code Adoption	IFA/ICB	Launch new grant program for local governments	Yes	Launch grants: 2025, Q3
GHG Measure 2. Deploying Clean Transportation & Freight				
Task 2.1 Heavy Duty Vehicle Charging	IEPA	Extend existing EV charging program for small and medium fleet operators	Yes	Launch 2026, Q1
	IFA/ICB	Launch new low-cost loan program for small and medium fleet operators	Yes	Launch 2026, Q1
Task 2.2 Trackside Power	IEPA	Extend existing program to issue competitive procurement(s) for trackside power	Yes	Launch 2026, Q1
Task 2.3 Zero-Emissions On-Road and Off-Road Vehicles	IEPA	Extend existing grant program to create new rebates for medium and heavy-duty vehicles, off-road vehicle for small and medium fleet operators	Yes	Launch 2026, Q1
	IFA/ICB	Launch new low-cost loan program for medium and heavy-duty vehicles, off-road vehicle small and medium fleet operators	Yes	Launch 2026, Q1
Task 2.4 Clean Fleet and Freight Concierge	IEPA	Competitive procurement of program administrators and develop tools for contractors	Yes	Launch 2026, Q1
Task 2.5 Freight Hub Data	IEPA	Expand existing program, competitive procurement to engage community-based organization partners, install air quality monitoring equipment, and develop GHG data analytics tools	Yes	Launch 2026, Q1
Task 2.6 Fleet/Freight Operation & Heavy-Duty Charging Workforce Training	DCEO	Extend existing workforce development program through grants to new workforce training hubs	Yes	Launch 2025, Q3
Task 2.7 Critical Freight Planning	IEPA	Interagency Coordination – competitive procurement of consultants to develop clean freight plan, and facilitate working groups, grants to community-based organization partners	Yes	Launch 2025, Q3
GHG Measure 3. Kick-starting Industry Decarbonization				
Task 3.1 Clean Industry Concierge	IEPA	Conduct solicitation for contractor to serve Clean Concierge role	Yes	Launch 2026, Q1
Task 3.2 Fluorinated Gas Reduction Program	IEPA	Competitive procurement of consultant to structure a grant program and launch new competitive grant program for F-gas reduction projects	Yes	Design 2026, Q1; Pilot Program launch 2027, Q1
GHG Measure 4. Expanding Climate-Smart Agriculture				

Task 4.1 Low-Till, No-Till, and Cover Crop Practices	IDOA	Expand existing cover crop and no-till programs; competitive procurement of outreach partners; and consultant to create tools and resources	Yes	Launch 2026, Q1
Task 4.2 Biomethane Emissions	IEPA	Competitive procurement of outreach partners; and consultant to create tools and resources; launch new competitive grant program	Yes	Design 2026, Q1; Pilot Program launch 2027, Q1
Task 4.3 Clean Landscaping and Small Engine Equipment	IEPA	Launch new rebates program through expanding utilities programs	Yes	Rebate program launched: 2026, Q1
GHG Measure 5. Keeping Clean Power Goals on Track				
Task 5.1 Clean Energy Modeling	IPA	Competitive procurement of consultant to conduct modeling	Yes	Study Initiated: 2026 Q2
Task 5.2 Small Utility Clean Energy Planning Support	IFA/ICB	Launch new grants program to municipal and coop utilities. Competitive procurement of expert.	Yes	Launch grants: 2026, Q1

Illinois EPA. Will use its existing Grantmaking Authority to create new and expand existing programs. IEPA operates a number of energy efficiency, EV charging, and other grant programs that will be leveraged.

IFA/Climate Bank. Has broad authority to develop and implement new financial assistance opportunities, including grant and loan programs, to leverage existing funding programs, along with an ability to efficiently obtain necessary board approvals for new initiatives. IFA does not require annual appropriation authority to spend funds. Public Act 103-187, which became effective January 1, 2024, better enables municipalities to borrow directly from ICB.

Illinois DCEO. Has authority under CEJA to operate the Clean Jobs Workforce Network Program and Clean Energy Contractor Incubator Program - a robust network of workforce development programs.

Illinois Power Agency (IPA). Has statutory authority under IPA Act to implement the Solar for All program that provides incentives for low-income distributed generation and community solar projects; this includes the Bright Neighborhoods Pilot community outreach program, which will coordinate with other programs. IPA also has broad authority to procure technical resources needed to further support and expand planning capacity under the existing Long-Term Renewable Resources Procurement Plan process.

Capital Development Board (CDB). Has statutory authority to review and recommend periodic revisions to building energy codes to promote public safety and energy efficiency. Public Act 103-510 created the framework for the adoption of statewide building codes, to be implemented by CDB by July 1, 2025; units of local government retain authority until that date. CDB is also currently developing the Illinois Stretch Energy Code pursuant to a mandate under CEJA.

Illinois DOA. Will leverage its existing “Fall Covers for Spring Savings” program to expand the incentives available for cover crop integration, no-till farming practices, and sustainable agriculture enhancement. IDOA also implements programs under the authority of the Illinois Forestry Development Act.

4. LOW-INCOME AND DISADVANTAGED COMMUNITIES

Low-Income and Disadvantaged Communities (LIDACs) Identification: In 2021, CEJA created a new designation of Equity Investment Eligible Communities that often suffer the most from poor air quality and economic inequality, and may otherwise be left behind in the shift to a clean energy economy. Under CEJA, the state targets consideration and benefits to these newly-defined Equity Eligible Persons and Equity Investment Eligible Communities which are, among other criteria, residents of EJ or Restore. Reinvest. Renew (R3) areas.

Environmental Justice Communities: These communities have been identified through a calculation utilizing the U.S. EPA tool EJ Screen and a demonstrated higher risk of exposure to pollution based on environmental and socioeconomic factors. Importantly, the statute creates a formal self-designation process at the state level for communities that believe the data methodology unjustly excludes them.

Restore. Reinvest. Renew. (R3) Areas: R3 areas are communities that have been harmed by violence, excessive incarceration, and economic disinvestment, as originally defined for eligibility for R3 grants under Illinois' cannabis law.

The two community designations were thoughtfully considered to ensure that the state's energy policy and investments targeted communities experiencing burdens due to pollution, but also those that have faced socioeconomic harm and historic disinvestment. A census tract with either designation qualifies as an Equity Investment Eligible Community under Illinois law, which creates opportunities for residents and businesses to see benefits from solar energy and energy efficiency programs, workforce development and contractor accelerator programs, electric vehicle deployment, and utility infrastructure planning.

Illinois intends for at least 40% of the benefits of this effort to support communities classified as either disadvantaged communities, under federal guidance, or equity investment eligible communities, under the state designation, growing to 60%. These efforts will drive new capital investment in Illinois' Equity Investment Eligible Communities and create wealth-building opportunities for Equity Eligible Contractors.

An initial examination has determined that 1,452 census tracts in Illinois are either classified as an Equity Investment Eligible Community by The State of Illinois or as a Disadvantaged Community by the White House CEQ' Climate and Environmental Justice Screening Tool (CEJST). There are 860 census tracts that overlap, meaning they are both Equity Investment Eligible Communities per Illinois and Disadvantaged Communities per CEJST. There are 201 census tracts that have been designated by CEJST but are not Equity Investment Eligible Communities. There are 391 census tracts that are Equity Investment Eligible Communities and not Disadvantaged Communities per CEJST.

Community Benefits

Mitigating climate impacts holds a range of direct and indirect benefits for low-income and disadvantaged communities, providing transformative benefits across different aspects of life. Direct benefits are evident through increased resilience to climate change, achieved by implementing measures that reduce greenhouse gas (GHG) emissions and enhance climate adaptation. Strategies like heat island mitigation cut GHG emissions by curbing energy demand and alleviating health impacts related to extreme heat. Such initiatives also contribute to improved public health by reducing co-pollutants such

as nitrogen oxides, ozone, particulate matter, and hazardous air pollutants, resulting in a decline in new asthma cases, hospital admissions, and emergency department visits.

The impact extends to economic empowerment with the creation of high-quality jobs and new workforce training opportunities within these communities, emphasizing accessibility for individuals facing barriers to employment. Residents will benefit from improved access to services and amenities, decreased energy costs, and enhanced energy resilience. The mitigation efforts also address noise pollution, introduce new green spaces, and beautify communities, fostering a healthier and more pleasant living environment.

Additionally, the initiatives contribute to increased access to transportation alternatives, enhancing mobility options for residents. Housing quality, comfort, and safety are also improved, creating a positive ripple effect on overall community well-being. The comprehensive benefits are not predetermined but are identified through ongoing consultation with residents of low-income and disadvantaged communities, ensuring that the mitigation strategies align with the specific needs and aspirations of these communities. Ultimately, the multifaceted advantages of climate impact mitigation extend beyond environmental concerns, actively shaping more resilient, healthy, and vibrant communities.

Community Engagement
As part of the implementation of the CPRG initiatives, the IEPA, alongside other state partners, will involve stakeholders and community-based organizations in an initial planning phase. This phase, beginninging Q4 2024, will gather crucial input on the design of program elements, ensuring community representation and accessibility. The planning process will prioritize the following program elements:

Meaningful Benefits Plan:
- Gather information on real-world costs of gap-filling.
- Identify communities most in need and implementation-ready.
- Identify community resilience benefits as part of the implementation.

Financial Assistance:
- Analyze to establish incentive levels for grant and incentive programs.
- Develop simplified application requirements/processes.

Finance Offerings:
- Ensure equitable lending processes.
- Design financial products that promote long-term ownership and wealth-building in low-income and disadvantaged communities.

Outreach Strategy:
- Develop the scope of work for Community-Based Outreach partners.
- Continue evaluating opportunities and processes for braiding initiatives with other incentives and initiatives.
- Design strategies for cross-entity customer referrals.

Equitable Access and Meaningful Involvement:
- Continuously improve access opportunities to decision-making processes impacting low-income and disadvantaged communities.

Workforce Training:
- Assess the skills needed for incorporation into pre-apprenticeship pipelines and project requirements.

In addition, community engagement specifically focused on low-income and disadvantaged communities is built into several measure initiatives including the clean buildings access portal, the community geothermal planning + pilots, create a freight hub data collection and analysis program emphasizing

monitoring and metrics in local communities, and facilitate statewide and interagency coordination around critical freight planning and engagement. This comprehensive approach aims to ensure that the CPRG initiatives are well-designed, inclusive, and responsive to the needs of the communities they intend to serve.

5. JOB QUALITY

Prevailing Wage Requirements. The prevailing wage requirements in Illinois are stipulated in the Illinois Prevailing Wage Act (PWA). The prevailing wage in Illinois is a minimum compensation level by county set by the Illinois Department of Labor (IDOL) for construction activities related to public works. IDOL oversees the implementation and enforcement of the PWA and has multiple resources. The PWA requires that employees engaged in construction activities related to the project be paid the prevailing wage of that location, as determined by the IDOL annually and updated regularly on its website. IEPA may refer potential violations of the PWA to IDOL for further investigation and enforcement.

Diverse Workforce. This PCAP includes measures directly targeted at addressing the challenges and opportunities for creating a diverse clean energy workforce. This analysis is spread throughout the sectors and measures included in the PCAP, and summarized below.

In the area of **clean buildings**, the PCAP emphasizes preparing more contractors for clean buildings work, and ensuring customers can find them. It targets expanding workforce and contractor training and capacity to take on efficiency and electrification projects and connecting customers with qualified contractors, which today is difficult and impedes project uptake. It proposes to **expand the existing Clean Jobs Workforce Network Program** to support additional skills such as ground-source and air-source heat pump installation, heat pump water heater installation, roof replacement and repair, mold and asbestos identification and remediation, electrical upgrades, energy storage installation, and more. It also proposes to **expand the Clean Energy Contractor Incubator Program** to support new contractor and subcontractor businesses in communities not well served by an existing contractor base experienced in these types of projects.

In the area of **clean freight and fleets**, the PCAP outlines the need for the Workforce Training Program for Fleet and Freight Operators, an integral component of Illinois' strategic effort to transition towards a more sustainable, efficient, and electrified fleet industry. The success and longevity of fleets acquired through the Zero Emissions Vehicle Initiative critically depend on operators' ability to use these vehicles to their fullest potential. This training program will provide comprehensive instruction to fleet operators, dispatchers, and drivers, focusing on optimizing EV use from operational, logistical, and environmental standpoints. The curriculum aims to enhance the skill set of those at the forefront of fleet operations, ensuring that the investment in zero-emission vehicles yields maximum environmental and economic benefits. By integrating the Workforce Training Program closely with the Zero Emissions Vehicle Initiative, Illinois is establishing a holistic approach that marries vehicle acquisition with operator expertise, setting a standard for a cleaner, more sustainable transportation future. This initiative would include:

- Fleet Operator Training on driving strategies to maximize battery life, route optimization, vehicle weight, distance, start-stop frequency, speed, logistics, and topography.
- Dispatcher Training. Instruction on planning efficient routes and logistics aligned with battery life and charging station availability, essential to minimize downtime and maximize vehicle utility.
- Driver Training. Guidance on strategic charging — when and where to charge to ensure operational efficiency and vehicle readiness.

- Comprehensive Fleet Training. Workshops and/or training on managed charging, utilizing software and tools for ensuring charging availability, and exploring potential revenue streams from smart charging practices.

Finally, all this builds on Illinois' existing policy measures and programs to address workforce development in the **power sector,** including: the Clean Jobs Workforce Network Program, Climate Works Pre-apprenticeship Program, Energy Transition Navigator Program, Returning Resident Clean Jobs Program, Solar Training Pipeline Program, Multi-cultural Jobs Program, and Craft Apprenticeship Program. These programs are also cited in the LIDAC section of PCAP, because the State has prioritized knitting workforce development initiatives together with benefits to LIDACs.

Illinois Workforce Development Programs. Illinois has been actively pursuing equitable workforce transition towards a clean energy economy for many years. Both the 2017 Future Energy Jobs Act and CEJA place great emphasis on clean energy workforce development and transition and establish a comprehensive framework of workforce development programs with a wrap-around approach currently funded at close to $106 million annually.

6. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Past Performance

Illinois administers a number of federal programs, including the State Energy Office, US DOE Methane Emissions Reduction Program, USDA Agriculture Conservation Easement Program, USDA Conservation Stewardship Program, US EPA Diesel Emission Reduction Act (DERA) Program, US FHWA Congestion Mitigation and Air Quality Improvement (CMAQ) Program, and in the future Home Energy Rebates Program, the High-Efficiency Electric Home Rebate Act.

Illinois Environmental Protection Agency (IEPA) is the primary implementing agency for programs and requirements under the Illinois Environmental Protection Act. IEPA has a broad Grantmaking Authority and administers a variety of grant programs with state and federal funds. IEPA operates a growing number of relevant programs, including: energy efficiency assessment programs for municipal water systems and public housing; EV and charging infrastructure grant programs under its "Driving a Cleaner Illinois" program, which includes federal Volkswagen Settlement and additional EV rebate and charging programs authorized by CEJA and Rebuild Illinois capital program. IEPA has successfully completed the following federal awards during the past three years: Capitalization Grants for Clean Water State Revolving Funds; Capitalization Grants for Drinking Water State Revolving Funds; Performance Partnership Grant with US EPA; Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act; and the Nonpoint Source Implementation Grant. IEPA recent experience in implementing assistance agreements include: State Energy Program Formula Grant ($2,166,900, CFDA #81.041, AA#EE0010029, contact: Cortney Busse, DOE), National Air Toxics Trends Station (NATTS) ($84,000, CFDA #66.034, AA#XA00E16907, contact: Grace Iftner, EPA), Homeland Security Biowatch Program: Field Operations and Sample Collection Activities for the State of Illinois (BIOWATCH) ($982,707, CFDA #97.092, AA #06OHBIO00022-18-00, contact: Theresa Gallagher, EPA), National PM2.5 Performance Evaluation Program (PM2.5) ($2,357,548, CFDA #66.034, AA #PM96579608, contact: Lisa Holscher, EPA), and Volkswagen Environmental Mitigation Trust ($108,679,676, WV private funding, contact Michael Bochanski, Jr., VW Trustee Wilmington Trust Co.).

Project implementation will rely on the expertise and experience of partner agencies in implementing similar or comparative initiatives:

Illinois Climate Bank (ICB). CEJA designated the Illinois Finance Authority (IFA) as the Illinois Climate Bank. The GHG measures in this proposal will use the lending capacity of ICB. ICB is a lead implementing agency under a number of recent IRA and IIJA awards including: US FHWA Charging and Fueling Infrastructure Program, US DOE Grid Resilience Formula Grants (40401d), and US DOE Energy Efficiency Revolving Loan Fund Program.

Illinois Department of Commerce and Economic Opportunity (DCEO) operates workforce development programs on behalf of the state. In addition, DCEO administers the Weatherization Assistance Program for Illinois.

Illinois Power Agency (IPA) operates Solar for All and Illinois Shines programs that provide incentives for distributed generation and community solar projects. IPA develops procurement plans and manages Illinois electricity and Renewable Energy Credits (REC) procurement, develops Long-Term Renewable Resources Procurement Plans and operates electricity hedging and REC procurement markets.

Illinois Department of Agriculture (IDOA)'s "Fall Covers for Spring Savings" program provides incentives for cover crop integration, no-till farming practices, and sustainable agriculture enhancement. IDOA also implements programs under the authority of the Illinois Forestry Development Act.

b. Reporting Requirements

IEPA has an extensive history in providing timely and accurate final technical reports as well as submitting required monitoring reports to document achievement of outputs and outcomes associated with assistance agreements from USEPA.

ICB has a good track record of timely and accurate reporting on recently awarded IRA and IIJA funding opportunities including US DOE's Grid Resilience Formula Grants (40401d), Energy Efficiency Revolving Loan Fund Program and Regional Clean Hydrogen Hubs Program. ICB is also implementing and timely and diligently reporting on its US FHWA Charging and Fueling Infrastructure Program grant.

DCEO has an extensive history of implementing the federal Weatherization Assistance Program. In FY 2023, DCEO also implemented a number of federal grants and programs, including US Treasury's ARPA SLFRF, CPF Broadband, Emergency Rental Assistance and SSBCI programs; and the Small Business Administration's Development Centers and State Trade Export Programs; among others.

c. Staff Expertise

The proposed GHG reduction measures will be implemented by the Project Management Team listed below, which combines tremendous expertise and experience in implementing similar initiatives. Resumes for all staff listed below, and for J.C. Kibbey, Climate Advisor and primary contact for this application, have been submitted with this application:

- **Illinois Environmental Protection Agency (IEPA):**
    - **Megha Lakhchaura**, State Electric Vehicle Officer, leads Illinois' effort to put one million EVs on the road by 2030, and has vital experience in the clean energy industry.

- **Darwin J. Burkhart**, Manager, Grant & Rebate Programs, Bureau of Air has managed nearly 40 federal grants and resulting projects totaling more than $80 million.
- **Rory A. Davis**, P.E., Manager, Regulatory Development Unit, Bureau of Air, is a licensed engineer with over 18 years experience in all facets of air pollution control regulation.

- **Illinois Finance Authority/Illinois Climate Bank (ICB):**
  - Executive Director **Chris Meister** has overseen over 390 individual transactions, mainly federally tax-exempt conduit bonds involving privately-owned capital projects and publicly-owned infrastructure, with an estimated value of over $13.7 billion.
- **Illinois Department of Commerce and Economics Opportunity (DCEO):**
  - Deputy Director **Hilary Scott-Ogunrinde** of the Energy and Utility Division has extensive experience in economic development, including private sector experience in clean energy, construction, and manufacturing.
  - Federal Policy Manager **Chad Phillips** has significant experience working with federal agencies and entities and in community relations.
- **Illinois Department of Agriculture (IDA):**
  - **Brian Rennecker**, Bureau Chief of the Department's Land and Water Resources Division, has decades of experience administering successful agricultural conservation programs.
  - **Elliot Lagacy**, Agricultural Land and Water Resource Supervisor, is experienced in working with communities to manage soil and water resource protection programs.
- **Illinois Power Agency (IPA):**
  a. **Brian Granahan**, Acting Director, and **Anthony Star,** Senior Advisor and Planning and Procurement Bureau Chief, have extensive expertise in overseeing and managing energy modeling and planning. Anthony most recently managed development of the offshore wind, DC transmission line and energy storage Policy Study for Illinois General Assembly involving modeling of economic impacts, grid resilience, and emissions reductions.

7. BUDGET

a. Budget Detail

The budget for Illinois' proposal is summarized below, and additional information is included in Appendix B: Budget Narrative and the budget spreadsheet attached to this application.

Table 7. Budget Summary

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Personnel	$ 2,699,250	$ 2,844,780	$ 2,994,272	$ 3,144,643	$ 3,312,127	$ 14,995,072
Total Fringe Benefits	$ 674,813	$ 711,195	$ 748,568	$ 786,161	$ 828,032	$ 3,748,768
Total Travel	$ 56,062	$ 56,062	$ 56,062	$ 56,062	$ 56,062	$ 280,308
Total Equipment	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 100,000
Total Supplies	$ -	$ -	$ -	$ -	$ -	$ -
Total Contractual	$ 15,710,000	$ 11,615,000	$ 10,300,000	$ 9,325,000	$ 7,600,000	$ 54,550,000
Total Other	$ 61,174,000	$ 70,624,000	$ 77,719,000	$ 77,102,950	$ 64,853,558	$ 351,473,618
Total Direct	$ 80,334,124	$ 85,871,037	$ 91,837,901	$ 90,434,815	$ 76,669,888	$ 425,147,765

Total Indirect	$ 1,193,064	$ 960,190	$ 957,634	$ 981,379	$ 1,011,345	$ 5,103,612
Total	**$ 81,527,188**	**$ 86,831,226**	**$ 92,795,535**	**$ 91,416,195**	**$ 77,681,233**	**$ 430,251,378**

The bulk of Illinois' proposal costs will be for contractual work and direct incentives to building, fleet, and business owners to fill gaps in funding for projects that reduce GHG emissions. Personnel costs are for staff at State agencies to oversee and manage the various tasks, with associated fringe and indirect costs. Travel costs have been kept to the minimum necessary to ensure strong project oversight and community outreach and none of the measures require equipment or supply costs.

b. Expenditure of Awarded Funds

Table 8. Program cost for each measure and task

Initiative	Cost	Budget Appendix Reference
GHG Measure 1. Accelerating Clean & Efficient Building Adoption		
Task 1.1 Clean Building Catalyst Fund	$81,360,282	Pg. 1-2
Task 1.2 Clean Building Navigator Consumer Outreach Program	$ 32,928,815	Pg. 2
Task 1.3 Clean Buildings Access Portal	$ 2,527,560	Pg. 2-3
Task 1.4 Clean Buildings Contractor Training	$ 15,905,120	Pg. 3
Task 1.5 Large Building Outreach & Clean Buildings Concierge	$ 2,672,777	Pg. 3
Task 1.6 Community Geothermal Planning + Pilots	$ 17,600,874	Pg. 3
Task 1.7 Stretch Building Code Adoption	$ 19,123,826	Pg. 3-4
GHG Measure 2. Deploying Clean Transportation & Freight		
Task 2.1 Heavy Duty Vehicle Charging	$ 44,325,099	Pg. 4
Task 2.1 Trackside Power	$ 15,920,747	Pg. 4-5
Task 2.3 Zero-Emissions On-Road and Off-Road Vehicles	$ 32,401,116	Pg. 5
Task 2.4 Clean Fleet and Freight Concierge	$ 4,339,315	Pg. 5-6
Task 2.5 Freight Hub Data	$ 3,129,871	Pg. 6
Task 2.6 Fleet/Freight Operation & Heavy-Duty Charging Workforce Training	$ 4,645,331	Pg. 6-7
Task 2.7 Critical Freight Planning	$ 10,650,949	Pg. 7
GHG Measure 3. Kick-starting Industry Decarbonization		
Task 3.1 Clean Industry Concierge	$ 2,644,955	Pg. 7-8
Task 3.2 Fluorinated Gas Reduction Program	$ 22,220,747	Pg. 8
GHG Measure 4. Expanding Climate-Smart Agriculture		
Task 4.1 Low-Till, No-Till, and Cover Crop Practices	$ 73,386,721	Pg. 8
Task 4.2 Biomethane Emissions	$ 26,242,570	Pg. 8-9

Task 4.3 Clean Landscaping and Small Engine Equipment	$ 12,092,659	Pg. 9
GHG Measure 5. Keeping Clean Power Goals on Track		
Task 5.1 Clean Energy Modeling	$ 3,705,181	Pg. 9-10
Task 5.2 Small Utility Clean Energy Planning Support	$ 2,616,250	Pg. 10

c. Reasonableness of Costs

By 2030: When combined, the portfolio of Illinois initiatives achieves 8,468,463 MT CO2e from 2025-2030, at a total cost of $430,251,378. This represents a cost of $50.72/ton CO2e from the measures in the proposed program. The $50.72/ton CO2e cost is 73% less than the social cost of carbon as calculated by the US EPA. Each measure was found to be reasonable and cost-beneficial even if the cost per ton exceeded the social cost of carbon, as the benefits included non-carbon benefits such as co-pollutant reductions, energy burden reduction, resiliency, and demonstrating replicable and innovative models. Specifically:

- *GHG Measure 1 Accelerating Clean & Efficient Building Adoption*: The portfolio for the buildings measure as a whole achieves a competitive cost per ton of $46.14. Some individual program tasks resulted in a higher per ton cost, largely as a result of the need to achieve additional LIDAC benefits such as energy burden reduction and resiliency, and for the purpose of them being replicable and innovative models that can be demonstrated and shared across jurisdictions.
- *GHG Measure 2. Deploying Clean Transportation & Freight*: While the cost per ton of CO2e for the transportation portfolio is higher, that is a result of the initiatives focusing on reducing co-pollutants in LIDAC communities.

By 2050: When projected out to 2050, the portfolio of Illinois initiatives achieves 57,406,778 MT CO2e from 2025-2050. At the same total cost of $430,251,378, this represents a cost of $7.50/ton CO2e from the measures in the proposed program. The $7.50/ton CO2e cost is 96% less than the social cost of carbon as calculated by the US EPA.

Appendix B: Budget Narrative

This appendix provides a detailed justification for each cost element within the attached Budget Spreadsheets. The Budget Spreadsheets include tabs for each measure and for each task.

Budget narrative applicable to all tasks and measures

Personnel and Indirect Costs: Personnel costs across all measures and initiatives are derived from standard compensation rates, factoring in a projected 6% annual increase. Staffing for each initiative is optimized, and does not necessarily assign personnel as full-time. The following table details the standard compensation rates and indirect cost calculations for each state agency.

Table B.1. Personnel and Indirect Costs by Agency

	IEPA	IFA/ICB	DCEO	IDOA
Project Manager	$120,000	$120,000	$120,000	$120,000
Project Manager-SME		$145,000		
Project Staff	$75,000	$75,000	$80,000	$75,000
Indirect Costs	37.04% of personnel + fringe for Air Division. 30.62% of personnel + fringe for SEO.	De minimus 10% of direct costs.	De minimus 10% of direct costs.	42.62% of salaries only.

Fringe Benefits: All measures and tasks project fringe benefits to constitute 25% of personnel expenses, encompassing health insurance, retirement plans, paid leave, and various other insurances and benefits.

Equipment: No measures require equipment.

Supplies: No measures require supplies.

Travel, Contractual, and Other costs: Discussion of travel, contractual, and other costs are included below only for measures and tasks that require them.

GHG Measure 1. Accelerating Clean & Efficient Building Adoption

Task 1.1 Clean Building Gap Closing and Incentive Stacking Catalyst Fund						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Federal Funds	$16,259,500	$16,264,000	$16,268,770	$16,281,326	$ 16,286,686	$81,360,282

Approach: This initiative expands residential grant program offerings, which currently include funding for energy efficiency, electrification, enabling upgrades, and energy storage rebates, to include two additional program categories.

Other:

- **Whole-Building Electrification Incentives** of up to $12,000 (average $7,500) to fund gaps remaining after state and federal incentives for 10,312 low income home decarbonization projects.
- **Low-cost Equitable Bridge Loans** for residential and small commercial decarbonization projects, offered at the point of sale of contractor and outreach engagement with households, to cover financial gaps with rebates and other grants.

Task 1.2 Clean Building Navigator Program for Consumer Outreach Project Support

Year	1	2	3	4	5	Total
Federal Funds	$ 6,686,707	$ 6,709,807	$ 6,484,293	$ 6,510,248	$ 6,537,760	$32,928,815

Approach: This initiative builds the pipeline for electrification projects by engaging community based organizations (CBOs) to educate residents and refer them to incentives and by educating the real estate industry in the value of efficiency, solar, and electrification. The program will build trust in the contractor ecosystem by vetting contractors, ensuring consistent standards for installations and technical assistance, and providing quality assurance and control services. The program will ease customer acquisition by assisting with income qualification.

Travel: This initiative includes travel and related expenses for about three workshops per year and multiple in person meetings and trainings.

Contractual:

- **Statewide Community Input Facilitator Contract**: A $200,000 contract for professional services to facilitate community input sessions in 13 communities to ensure community benefits from clean buildings programs are shared equitably.
- **Contract for Materials, Consistent Standards, and QA/QC:** A $3,000,000 contract over 5 years for professional services to develop materials and assessment, installation, and technical assistance standards for electrification contractors, and ensure contractors are providing a high quality electrification experience for residential and small business customers.
- **Contract for Program Infrastructure and Building Owner Technical Assistance**: A $3,000,000 contract for each of the program's 5 years to demonstrate contractor qualifications, income qualify customers, provide home assessments where not provided by other programs, facilitate coordination between building owners and electrification and solar contractors, and provide other services necessary to facilitate comprehensive whole home electrification retrofits.

Other:

- **Participation Stipends**: Up to $15,000 stipends for up to 8 CBOs in each of 13 communities.
- **CBO Grassroots Educators Grants**: $975,000 per year for grants to CBOs in 13 communities for grassroots education on residential and small business electrification. Cost and scope based on similar work by the existing Illinois Solar for All program, to be coordinated with this effort.

Task 1.3 Clean Buildings Access Portal

Year	1	2	3	4	5	Total
Federal Funds	$962,500	$417,450	$422,697	$373,259	$351,654	$2,527,560

Approach: This initiative will develop and launch a shared online portal to help contractors administer multiple agency incentives quickly, easily, and with a minimum of paperwork for the customer.

Contractual:

- **Contract to Develop Portal**: A $2,500,000 agreement over the 5-year program period to develop and maintain a contractor portal.

Task 1.4 Clean Buildings Contractor Training

Year	1	2	3	4	5	Total
Federal Funds	$3,160,000	$3,169,900	$3,180,394	$3,191,518	$3,203,309	$15,905,120

Approach: This initiative expands the Clean Jobs Workforce Network and Clean Energy Contractor Incubator Programs in specific communities to include electrification and new service areas.

Other:

- **Clean Jobs Workforce Network Program Grants:** $3,900,000 over 5 years for grants to expand the Clean Jobs Workforce Network Program's training programs to include electrification for 2 contractors per year in each of 13 communities. Cost based on comparable previous work.
- **Clean Energy Contractor Incubator Program Grants:** $11,050,000 over 5 years for grants to expand the Clean Energy Contractor Incubator and Primes Accelerator Programs to serve 2 electrification contractors per year in each of 13 communities. Cost based on comparable previous work.

Task 1.5 Large Building Owner Outreach and Clean Buildings Concierge

Year	1	2	3	4	5	Total
Federal Funds	$524,043	$528,993	$534,240	$539,802	$545,698	$2,672,777

Approach: This initiative will provide specialized technical assistance to mid-sized commercial buildings in areas not served by existing utility programs.

Travel: Includes travel and related expenses for one workshop per year and several in-person meetings.

Contractual:

- **Contract for Building Concierge Services**: A $440,000 per year agreement to provide planning assistance for building owners, contractor support, and stakeholder engagement.

Task 1.6 Community Geothermal Planning and Pilots

Year	1	2	3	4	5	Total
Federal Funds	$3,041,449	$5,722,330	$5,519,164	$2,982,008	$335,923	$17,600,874

Approach: ICB will conduct a competitive solicitation for Community Geothermal projects to receive grant funding, and will create and develop a loan program offering.

Travel: Includes travel and related expenses for one workshop per year and multiple in-person meetings.

Contractual:

- **Contract for Program Development**: A $1,000,000 agreement with a consultant over the 5-year program period for community geothermal program design, RFP development, project selection, and project management.

Other:

- **Grant Program:** $15,000,000 over 4 years for competitive grants to community geothermal pilot projects. Grants support community system cost, enabling 1,100 households to decarbonize.

Task 1.7 Accelerate Stretch Code Adoption by Local Governments

Year	1	2	3	4	5	Total
Federal Funds	$3,799,800	$3,811,556	$3,824,017	$3,837,226	$3,851,227	$19,123,826

Approach: ICB will make available grants to local governments through an open process to facilitate the learning and internal education efforts needed to encourage stretch code adoption.

Travel: Includes travel and related expenses for two workshops per year and several in-person meetings.

Other:

- **Community Grants**: $18,000,000 over the 5-year program period in grants to about 18 communities/year to fund staff time to understand the Illinois stretch code, engage their community, and advise decision makers in advance of potential adoption.

GHG Measure 2. Deploying Clean Transportation & Freight

Task 2.1 Create a Heavy Duty Vehicle Charging Infrastructure Program for Small and Medium Fleet Operators

Year	1	2	3	4	5	Total
Federal Funds	$4,656,655	$10,311,647	$10,338,139	$10,269,862	$ 8,748,796	$44,325,099

Approach: This initiative establishes a grant and low-cost loan program aimed at facilitating the deployment of charging infrastructure for heavy-duty vehicles, prioritizing the location and economic requirements of small and medium-sized fleet operators.

Travel: Includes travel and related expenses for about three workshops and multiple in-person meetings.

Contractual:

- **EV Charging Grant Contract**: A $1,100,000 agreement with a consultant over 5 years to structure and support the IL EPA in implementing the EV charging grant program. Cost based on comparable previous work.
- **Loan Program Contract**: An $800,000 contract for professional services over 5 years to support loan program development, including the creation of loan contracts and documents, loan design, and establishing loan origination and servicing structures.

Other:

- **Shared EV Charging Grants.** Direct grant incentives will support establishing on-site or shared EV charging for small and medium fleets. The State has conducted a gaps analysis, identifying an expected needed average subsidy of $60,000 per charger. The program will allocate $30,000,000 over 5 years resulting in approximately 500 heavy duty chargers being deployed.
- **Low-Cost Loans.** A low-cost loan program, featuring bridge loans, targeting small to medium fleet operators and installers unable to use federal tax credits. The State's gap analysis identified an expected average loan interest of $14,064.59. This program, with a $10,000,000 fund over 5 years, will speed the addition of 770 heavy-duty chargers in priority communities.

Task 2.2 Support Deployment of Trackside Power to Reduce Diesel Engine Idling

Year	1	2	3	4	5	Total
Federal Funds	$ 83,509	$ 88,519	$ 7,093,830	$ 8,399,460	$ 255,428	$ 15,5920,747

Approach: This initiative launches a competitive grant program to install trackside and traction power systems (such as substations, switching stations, and electrical feeds) at high-traffic train hubs, targeting areas with significant GHG emissions and substantial community impacts.

Contractual:

- **Competitive Grant Program Contract:** A $950,000 contract with a consultant over 3-years to develop the competitive grant RFP, perform technical review of competitive applications, and provide ongoing support to grant recipients. Cost is based on comparable previous work.

Other:

- **Competitive Grants**: This competitive grant program, with two solicitations and a $14.5 million budget, anticipates funding 5-7 projects with application values between $1-$3M. Selection will prioritize GHG reductions, contract value, and community benefits.

Task 2.3 Support Zero-Emissions On-Road and Off-Road Vehicle Deployment for Small and Medium Fleet Operators

Year	1	2	3	4	5	Total
Federal Funds	$6,815,405	$6,577,922	$6,326,790	$6,352,090	$6,328,909	$32,401,116

Approach: This initiative provides rebates for medium and heavy-duty vehicles and forklifts, and low-cost loans for heavy-duty vehicles, targeting small/medium fleet operators unable to use tax credits.

Travel: Includes travel and related expenses for about three workshops and multiple in-person meetings.

Contractual:

- **Loan Program Contract**: An $600,000 contract for professional services over the 5-year program period to support loan program development, including the creation of loan contracts and documents, loan design, and establishing loan origination and servicing structures. This contract will leverage already established processes at ICB for loan administration.
- **Vehicle Rebate Contract**: A $1,100,000 agreement with a consultant over the 5-year program period to structure and support the IL EPA in implementing the vehicle rebate programs. Cost is based on comparable previous work.

Other:

- **Medium Duty Vehicle Rebates.** Rebates to quickly replace diesel with medium duty electric vehicles. The State's cost analysis identified an average expected rebate of $50,000. The program will allocate $10,000,000 over 5 years, replacing approximately 200 diesel vehicles with electric.
- **Heavy Duty Vehicle Rebates.** Rebates to quickly replace diesel with heavy duty electric vehicles. The State's cost analysis identified an average expected rebate of $100,000 . The program will allocate $10,000,000 over 5 years, replacing 100 diesel vehicles with electric.
- **Off-Road (Forklift) Vehicle Rebates.** Rebates to quickly deploy electric forklifts. The State's cost analysis identified an expected rebate of $2,790. The program will allocate $2,500,000 over 5 years, replacing 896 combustion forklifts with electric.
- **Low-Cost Loans for Heavy Duty Vehicles.** The low-cost loan program targets small to medium fleet operators that may be unable to use federal tax credits. The State's gap analysis identified an average loan interest amount of $25,532.65. This program, with a $6,000,000 fund over 5 years, aims to replace 175 diesel vehicles with electric.

Task 2.4 Create a Clean Fleet and Freight Concierge

Year	1	2	3	4	5	Total
Federal Funds	$1,373,130	$780,068	$787,422	$695,217	$703,480	$4,339,315

Approach: This initiative focuses on enhancing coordination and support for freight companies, especially those that don't have the internal resources to access programs and incentives.

Travel: Includes travel and related expenses for about three workshops, two conferences, and multiple in-person meetings.

Contractual:

- **Contractor Tools and Contractor Outreach**: A $650,000 agreement with one or more service providers to create tools to aid contractors, and engage with those contracts in the heavy freight and fleet sector. Cost is based on comparable previous work.
- **Clean Freight Third Party Implementer(s)**: A $3,000,000 contract, split between northern and southern Illinois implementers, will engage with fleet and freight operators on clean freight initiatives. These implementers will also contribute to workforce training and planning efforts.

Task 2.5 Create a Freight Hub Data Collections and Analysis Program Emphasizing Monitoring and Metrics in Local Communities

Year	1	2	3	4	5	Total
Federal Funds	$497,953	$1,956,730	$220,734	$224,978	$229,476	$3,129,871

Approach: This initiative aims to implement comprehensive air pollution monitoring at key distributed freight hubs and in homes located in close proximity to monitor, track, and subsequently enhance local health outcomes and air quality associated with the clean freight transition.

Contractual:

- **CBOs**: $750,000 to contract with several CBOs to engage and educate communities on the indoor air quality monitors. These CBOs will assist with deploying indoor air quality monitors and continued education across a 5-year period.
- **Air Quality Monitoring Station Installation**:$100,000 to install state of the art air quality monitoring stations at various freight hubs over a two year period.
- **GHG Data Monitoring:** $125,000 agreement with a consultant or research institution to develop a publicly available data analysis and monitoring tool. This tool will assess the impact of emissions reductions initiatives utilizing data from the monitoring stations.

Other:

- **Deploy Indoor Air Quality Monitors**: Distribute 2,000 indoor air quality monitors, each costing an average of $150, via CBOs to EJ and disadvantaged communities within a two-year timeframe.
- **Deploy State of the Art Air Quality Monitoring Stations**: Collaborate with the planning initiative and the clean freight concierge to deploy at least 6 state of the art air quality monitoring stations at high traffic freight hubs. The program will allocate $1,500,000 to this initiative.

Task 2.6 Develop Workforce Training for Fleet and Freight Operators and to Maintain Heavy-Duty Charging Infrastructure

Year	1	2	3	4	5	Total
Federal Funds	$1,775,781	$1,327,328	$828,968	$680,706	$32,548	$4,645,331

Approach: This program leverages existing clean jobs workforce programs to 1) develop a specialized workforce for maintaining heavy-duty electric charging infrastructure, enhancing operational reliability

and promoting local economic growth and 2) concentrate on training fleet operators, dispatchers, and drivers to optimize EV use from operational, logistical, and environmental perspectives.

Other:

- **Fleet Operator Workforce Training**:A $1,500,000 grant over three years to the workforce training hubs will support training for fleet operators, dispatchers, and drivers on optimized EV use.
- **Heavy Duty Electric Charging Infrastructure Workforce Training**:A four-year, $3,000,000 grant to existing workforce training hubs for vocational training, job creation, and curriculum development to build a specialized workforce for heavy-duty vehicle charging infrastructure maintenance, emphasizing opportunities in disadvantaged and low-income communities.

Task 2.7 Facilitate Statewide and Interagency Coordination Around Critical Freight Planning and Engagement

Year	1	2	3	4	5	Total
Federal Funds	$3,087,628	$2,957,670	$2,028,914	$1,651,434	$925,304	$10,650,949

Approach: This initiative aims to establish a comprehensive planning and engagement framework for critical freight projects across the state and will act as a central architecture that will inform and support the other initiatives within the clean freight area.

Travel: Includes travel and related expenses for about three workshops and multiple in-person meetings.

Contractual:

- **CBO Compensation:** $5,500,000 to compensate CBOs and support disadvantaged and low income communities involved in clean freight planning and projects. This includes compensation for participation, engagement, outreach, and collaborative clean freight project development.
- **Strategic Planning Contract:** A $1,850,000 agreement with a consultant over a four-year period to help the state craft and implement a clean freight strategic plan.
- **Overcoming Barriers Contract**: A three-year, $1,400,000 agreement with a consultant to organize working groups, forums, and workstreams addressing challenges like interconnection, land use, and building codes with various stakeholders.

GHG Measure 3. Kick-starting Industry Decarbonization

Task 3.1 Create a Clean Industry Concierge

Year	1	2	3	4	5	Total
Federal Funds	$364,948	$421,561	$628,570	$886,000	$ 343,876	$2,644,955

Approach: The Clean Industry Concierge initiative will help Illinois industrial facilities to navigate, coordinate and access funding opportunities, get support in designing and implementing decarbonization measures, and provide strong guidance on industry best practices in efficient and cost-effective low-carbon technologies and processes with a focus on small- and medium-sized industrial facilities and operators that often fall through the cracks.

Travel: Includes travel and related expenses for about three workshops, and multiple in-person meetings.

Contractual:

- **Clean Industry Third Party Implementer**: A $2,000,000 contract with a consultant to act as the Clean Concierge, will engage with contractors, industrial facilities and industrial operators,

supporting them in designing and implementing decarbonization measures. This implementer will also contribute to workforce training and planning efforts.

Task 3.2 Fluorinated Gas Reduction Program						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Federal Funds	$4,733,509	$4,488,519	$4,493,830	$4,249,460	$4,255,428	$22,220,747

Approach: This competitive grant initiative will fund projects that facilitate adoption of lower carbon alternatives and reduce emissions from leaks, servicing and disposal of equipment utilizing fluorinated gases. The program will focus on the food sector and commercial refrigeration.

Contractual:

- **Competitive Grant Contract**: A $2,250,000 agreement with a consultant over a 5 year period to structure and support the IL EPA in creating and implementing the competitive grant program. Responsibilities include outreach and education, material and resource development, technical grant application development, technical application review, establishing technical grant agreements, and assisting the grantees with the implementation of their projects. Cost is based on comparable previous work.

Other:

- **Competitive Grant Program:** This competitive grant program, allocated $19,500,000 over 5 years, expects to fund up to 390 projects. Cost analysis indicates an expected average project award of $50,000. Priority will be given to projects that demonstrate replicability and scalability, and projects that demonstrate significant reduction in use of fluorinated gases.

GHG Measure 4. Expanding Climate-Smart Agriculture

Task 4.1 Expanding Deployment and Improving Efficiency of Low-Till, No-Till, and Cover Crop Practices						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Federal Funds	$14,156,880	$14,473,474	$14,748,564	$14,793,660	$15,214,142	$73,386,721

Approach: This initiative significantly expands the acreage under the current Illinois Cover Crop Program and creates pathways for various lands to participate in no-till practices.

Travel: Includes travel and related expenses for about two workshops and multiple in-person meetings.

Contractual:

- **Outreach and Education Contracts**: $2,250,000 for three contracts (Northern, Central, and Southern IL) with trusted partners to conduct outreach and education over the 5-year period.
- **Carbon Credit Facilitation Contract**: A $350,000, 18-month portion of a contract with a consultant to create tools and resources helping farmers capitalize on carbon credits.

Other:

- **Expand the Illinois Cover Crop Program.** Address the current program's demand gap by enrolling up to 230,702 additional acres over five years, at $55 per acre.
- **No-Till Program.** Following a gap analysis, the state will offer $35 per acre to include up to an additional 324,000 acres into a no-till program.

Task 4.2 Biomethane Emissions Reduction, Capture, and Utilization in High-Value End Uses						
Year	**1**	**2**	**3**	**4**	**5**	**Total**

Federal Funds	$4,088,655	$3,658,697	$5,884,271	$6,298,129	$6,312,818	$26,242,570

Approach: This competitive grant initiative prioritizes the development of localized, distributed biomethane utilization systems, aiming to significantly reduce local greenhouse gas emissions and develop regional supply chains specifically for its deployment in high-value end uses.

Travel: Includes travel and related expenses for about three workshops and multiple in-person meetings.

Contractual:

- **Outreach and Education Contracts**: $2,250,000 allocated for three contracts (Northern, Central, and Southern IL) with trusted partners to conduct outreach, education, and facilitate supply chains over the 5-year period.
- **Carbon Credit Facilitation Contract**: A $350,000, 18-month portion of a contract with a consultant to create tools and resources helping farmers capitalize on carbon credits.
- **Competitive Grant Contract**: A $1,300,000 agreement with a consultant over the 5-year program period to structure and support the IL EPA in creationing and implementing the biomethane competitive grant program. Cost is based on comparable previous work.

Other:

- **Competitive Grant Program.** This $20,660,000 competitive grant program anticipates funding up to 28 projects over the 5-year period. Selection will prioritize GHG reductions, contract value, community benefits, and innovative supply chain solutions.

Task 4.3 Accelerating Clean Landscaping and Small Engine Equipment

Year	1	2	3	4	5	Total
Federal Funds	$2,411,984	$2,415,067	$2,418,336	$2,421,800	$2,425,472	$12,092,659

Approach: This rebate program which promotes sustainable professional landscaping through adoption of all-electric equipment fills a gap in tax incentives which are currently only available for very large, commercial scale landscaping equipment.

Contractual:

- **Utility Rebate Contract**:A $1,000,000 contract with utilities to include this equipment in their in-store rebate programs and integrate it into their existing rebate management system.

Other:

- **Clean Landscaping Rebate.** A five-year, $10,000,000 rebate program for small commercial landscapers who recycle and replace gas-powered lawn mowers and tools with electric. The program will incentivize recycling and replacement of more than 45,000 pieces of commercial landscaping equipment.

GHG Measure 5. Keeping Clean Power Goals on Track

Task 5.1 Statewide Clean Energy Modeling

Year	1	2	3	4	5	Total
Federal Funds	$ 2,469,500	$ 284,350	$ 300,091	$ 316,776	$ 334,463	$ 3,705,181

Approach: IEPA will work with IPA to conduct a modeling exercise, the outcome of which will be incorporated into the IPA's existing biennial Long-Term Renewable Resources Procurement Plans.

Contractual:

- **Contract for Clean Energy Modeling**: $2,000,000 for a consultant to conduct a statewide clean energy modeling exercise to develop alternative paths to address resource capacity constraints.

Other:

- **Software and Data:** $200,000 per year for the 5-year program period for software licenses and data acquisition costs.

Task 5.2 Public Utility Clean Energy Planning and Support

Year	1	2	3	4	5	Total
Federal Funds	$611,250	$501,250	$501,250	$501,250	$ 501,250	$2,616,250

Approach: ICB will develop a technical assistance resource and make strategic planning grants to help municipal and co-op utilities assess needs and identify ways to replace fossil fuels with renewable energy.

Contractual:

- **Contract for Technical Expertise**: $350,000 over 5 years to develop a technical reference and provide ongoing support to utilities.

Other:

- **Grants to Municipal and Co-op Utilities**: Two annual grants of $200,000 each to help municipal and co-op utilities secure power system and generation plans and renewable energy purchase agreements.

Appendix C: GHG Emission Reductions

The following appendix provides a detailed description of the GHG emission reduction calculations within the attached GHG Emission Reduction Spreadsheets. The tables and narrative below describe the GHG emission reduction calculations for each GHG reduction measure, by output. Each output below is mapped to its applicable task in Table 5, Pg. 13-14 of the Work Plan.

Table C.1. GHG Emission Reduction Summary

	GHG Emission Reduction		$/Ton CO2e	
	2025-2030	2025-2050	2025-2030	2025-2050
GHG Measure 1. Accelerating Clean & Efficient Building Adoption	3,730,198	31,404,616	$46.14	$5.48
GHG Measure 2. Deploying Clean Transportation & Freight	155,598	1,095,257	$741.74	$105.37
GHG Measure 3. Kick-starting Industry Decarbonization	1,951,296	14,959,940	$12.74	$1.66
GHG Measure 4. Expanding Climate-Smart Agriculture	2,180,380	7,585,695	$51.24	$14.73
GHG Measure 5. Keeping Clean Power Goals on Track	468,991	2,361,270	$13.48	$2.68
Total	8,468,463	57,406,778	$50.72	$7.50

GHG Measure 1. Accelerating Clean & Efficient Building Adoption

Output: Retrofit 12,469 units of housing

Performance Measure Description: Units of housing fully electrified as a result of the Catalyst Fund, Navigator program, and Access Portal in Tasks 1.1, 1.2, and 1.3. Each of these tasks has associated performance measures, outlined in the budget spreadsheet. GHG reductions discussed here are a function of all three of these overlapping programs.

GHG Reduction Estimate Method: GHG reductions per unit are based on analysis of utility consumption data and NREL's Cambium model of national, regional, and state electricity grids. Methodology is described in detail in Direct Testimony of Chris Neme before the Illinois Commerce Commission, docket 23-0068. Number of units provided by each program were reduced according to a series of assumptions regarding causation from other incentive programs. Resulting units were multiplied by per unit GHG reduction estimate.

Models/Tools Used: NREL's Cambium model

Measure Implementation Assumptions: Homes addressed are 75% single-family and 25% multi-family. Of single-family, 30% will be low-income, 30% moderate income, and 40% non-income-qualified. For multifamily, proportions will be 50%, 30%, and 20% respectively. Assumes full electrification.

GHG Reduction Estimate Assumptions: Homes' existing appliances generally comport with those found in People's Gas efficiency potential study for their Northern Illinois service territory.

Reference Case Scenario: Emissions reductions calculated against typical homes using fossil gas.

Measure-Specific Activity Data: Catalyst program results in 2,062 unit retrofits annually. Navigator program results in 500 unique retrofits in the first year and 1,200 in years 2-5. Portal results in 101 unique retrofits each year (resulting from 4,000 applications).

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	15,629	19,813	29,827	38,655	47,834	151,758	1,250,171

Output: Retrofit 2,360,000 sq ft. commercial buildings

Performance Measure Description: Square feet of commercial buildings treated by Task 1.5.

GHG Reduction Estimate Method: Multiplied the estimated sq. ft. treated based on experience and costs of a similar program in Massachusetts by RMI per sq. ft. carbon reduction estimates. Reduced estimate to account for the portion (1.14%) attributable to federal tax credits.

Models/Tools Used: RMI's 2022 report, "Medium-Size Commercial Retrofits" for tons CO2e / sq. ft. and RMI's "Guide to Building the Case for Deep Energy Retrofits" for cost and federal tax credit information.

Measure Implementation Assumptions: Concierge program will achieve results similar to other states.

GHG Reduction Estimate Assumptions: 0.00028 tons / sq. ft. CO2e reduction for medium commercial space, per RMI 2022 report linked above.

Reference Case Scenario: Typical commercial office building space without retrofit.

Measure-Specific Activity Data: Program retrofits 472,000 sq. ft. per year.

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	113	226	340	453	566	1,698	13,015

Output: Train 52 building decarbonization workers and develop 26 new decarbonization contractor businesses every year

Performance Measure Description: Expand Illinois' existing solar and energy efficiency worker training and clean energy contractor accelerator program to include building decarbonization. Task 1.4.

GHG Reduction Estimate Method: The GHG reductions from this effort were estimated using the RMI Energy Policy Simulator for Illinois.

Models/Tools Used: RMI Energy Policy Simulator for Illinois

Measure Implementation Assumptions: Assumes training 2 employees at 2 decarbonization contractors (4 workers total) in each of 13 communities annually. Assumes 2 decarbonization contractors in each of 13 communities receive contactor accelerator services.

GHG Reduction Estimate Assumptions: Effect of additional services to workers and contractors will be typical of policies represented by RMI Energy Policy Simulator.

Reference Case Scenario: RMI Energy Policy Simulator Business as Usual scenario for Illinois.

Measure-Specific Activity Data: Train 52 workers per year and provide accelerator services to 26 contracting businesses annually.

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	208,067	416,133	624,200	832,267	1,040,333	3,121,000	26,486,000

Output: Deploy community geothermal to 1,100 households

Performance Measure Description: Deploy community geothermal pilots that reach 220 households per year for a total of 1,100 households over a 5-year period. Task 1.6.

GHG Reduction Estimate Method: Multiply GHG reductions from replacing a 90% efficient gas furnace with a 300% efficient geothermal system by the number of homes connected to the systems.

Models/Tools Used: NREL Cambium model for grid electricity carbon emissions.

Measure Implementation Assumptions: Pilots will replace 90% efficient gas furnaces with 300% efficient geothermal systems.

GHG Reduction Estimate Assumptions: NREL Cambium estimates of grid electricity carbon emissions.

Reference Case Scenario: Emissions from typical Illinois housing stock using fossil fuels for heat.

Measure-Specific Activity Data: Average of 220 households connected to community geothermal per year for a 5-year period.

Annual Projected Emission Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	893	1,901	3,027	4,092	5,185	15,099	128,562

Output: 90 communities serving 833,220 households adopt Illinois Stretch Energy Code

Performance Measure Description: 90 communities of average size among Illinois' top 100 largest municipalities adopt the Illinois Stretch Code for new construction and major renovation projects as a result of Task 1.7.

GHG Reduction Estimate Method: The GHG emission reductions resulting from improved codes in a typical mid-sized Illinois community were derived from data in PNNL's study (linked below) on the

emissions reductions from model building codes, population data from the US Census and Illinois emissions data.

Models/Tools Used: GHG reductions from adoption of codes from PNNL's Impacts of Model Energy Codes, November 2023.

Measure Implementation Assumptions: Adopting municipalities have an average of 46,758 residents each with a typical rate of new construction.

GHG Reduction Estimate Assumptions: We assume that adoption of the Illinois Stretch Code will result in GHG emission reductions similar to adoption of the latest model codes, which have been adopted, albeit with amendments, by the State. Because local action will be important in realizing reductions, our calculations assign only 50% of the emission reduction value to the actions of the State of Illinois.

Reference Case Scenario: ASHRAE 90.1-2019 and the 2021 IECC codes are baselines in the PNNL study, against which improved codes are measured.

Measure-Specific Activity Data:

Annual Projected Emission Reductions							
Year	**2025-26**	**2027**	**2028**	**2029**	**2030**	**2025-30**	**2025-50**
MTCO2e	54,978	58,800	82,222	107,555	134,799	438,355	3,508,556

GHG Measure 2. Deploying Clean Transportation & Freight

Output: Replace 402 heavy duty diesel vehicles with electric vehicles and charging stations

Performance Measure Description: The programs in Task 2.1, 2.3, 2.4, 2.6, and 2.7 together will offer grants, loans, and supporting workforce development and technical assistance to entice heavy duty fleet owners to replace diesel vehicles with electric vehicles and shared chargers. The program will track both grants and loans, but GHG emissions reductions are a function of new vehicles with charging capability.

GHG Reduction Estimate Method: GHG reductions were attributed to vehicle/charger pairs based on the difference between typical diesel equipment emissions and emissions related to electric use by electric equipment. Adjustments were made to remove reductions attributable to federal incentives.

Models/Tools Used: NREL 2022 Cambium analysis of electric system GHG emissions, U.S. Department of Transportation Vehicle Inventory and Use Survey (VIUS).

Measure Implementation Assumptions: Program uptake will use the entire budget.

GHG Reduction Estimate Assumptions: Supporting programs such as workforce development, outreach, technical assistance, and market development impacts result in an initial 10% (+5% each program year) of additional, unsubsidized vehicles and chargers beyond those deployed directly through rebates.

Reference Case Scenario: Typical current diesel equipment emissions per US DOT VIUS.

Measure-Specific Activity Data: 402 heavy duty vehicles incentivized by a combination of rebates and loans over the 5 year program period, coupled with an equal number of charger rebates and/or loans.

Annual Projected Emission Reductions							
Year	**2025-26**	**2027**	**2028**	**2029**	**2030**	**2025-30**	**2025-50**

MTCO2e	6,808	7,844	11,594	15,077	15,353	56,677	402,536

Output: Replace 240 medium-duty diesel vehicles with electric vehicles and chargers

Performance Measure Description: As with heavy-duty vehicles, the programs in Task 2.1, 2.3, 2.4, 2.6, and 2.7 together will offer grants, loans, and supporting workforce development and technical assistance to entice fleet owners to replace diesel medium-duty vehicles with electric vehicles and chargers. The program will track both grants and loans, but GHG emissions reductions are a function of new vehicles with charging capability. **The GHG reduction estimates for medium-duty vehicles were calculated using a method and assumptions identical to those used for heavy-duty vehicles, detailed above, and so are not repeated here.**

Measure-Specific Activity Data: 240 medium-duty vehicle rebates over the 5 year program period, with an equal number of charger rebates and/or loans.

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	924	1,036	1,503	1,947	1,975	7,383	50,810

Output: Deploy 761 heavy duty chargers

Performance Measure Description: As with heavy-duty vehicles, the programs in Task 2.1, 2.3, 2.4, 2.6, and 2.7 together will offer grants, loans, and supporting workforce development and technical assistance to entice fleet owners to replace diesel medium-duty vehicles with electric vehicles and chargers. The program will track both grants and loans, but GHG emissions reductions are a function of new vehicles with charging capability.

GHG Reduction Estimate Method: The majority of chargers deployed through this program are assumed to be "paired" with vehicles deployed through this program, and are accounted for in vehicles' emissions reductions above. Only emissions reductions from chargers *beyond* the number of deployed vehicles in the program are counted here. Those chargers are assumed to support vehicles deployed outside the program, and are credited with one-half of the expected emissions reduction from the vehicles they support. This may be a conservative assumption, since one charger would in many instances likely serve more than one electric vehicle. Otherwise, GHG reduction estimates for chargers were calculated using a method and assumptions identical to those used for heavy-duty vehicles, detailed above.

Measure-Specific Activity Data: 500 charger grants and 385 charger low-cost loans over the 5 year program period.

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	3,967	3,865	5,483	6,898	7,024	27,238	185,474

Output: Replace 1,075 off-road diesel vehicles (forklifts) with electric vehicles

Performance Measure Description: As with heavy-duty vehicles, the programs in Task 2.1, 2.3, 2.4, 2.6, and 2.7 together will offer grants, loans, and supporting workforce development and technical assistance to entice fleet owners to replace diesel off-road vehicles, that is, forklifts, with electric vehicles and

shared chargers. The program will track both grants and loans, but GHG emissions reductions are a function of new vehicles with charging capability. **The GHG reduction estimates for off-road vehicles were calculated using a method and assumptions identical to those used for heavy-duty vehicles, detailed above, and so are not repeated here.**

Measure-Specific Activity Data: 1,075 off-road vehicle rebates over the 5 year program period.

Annual Projected Emission Reductions							
Year	**2025-26**	**2027**	**2028**	**2029**	**2030**	**2025-30**	**2025-50**
MTCO2e	8,054	4,893	7,590	9,933	10,176	36,807	274,557

Output: Deploy 5-7 trackside power systems

Performance Measure Description: IEPA will issue grants via the program in Task 2.2 for trackside power in a select number of higher-than-average traffic locomotive hubs to reduce diesel idling.

GHG Reduction Estimate Method: There is an extreme lack of data on emissions reductions from trackside power systems. Consequently, GHG reductions were estimated by proxy, using the reduction in GHGs accomplished by replacing 5.5 diesel locomotives with electric locomotives, which could be done under the same budget.

Models/Tools Used: Federal Railroad Administration's Locomotive Emissions Comparison Tool.

Measure Implementation Assumptions: That per-dollar emissions reductions from a trackside power system would be the same or greater than those from replacing a diesel locomotive with an electric one.

GHG Reduction Estimate Assumptions: The locomotive to be replaced is a Tier 0 high emitting model.

Reference Case Scenario: Diesel emissions from a Tier 0 high emitting locomotive.

Measure-Specific Activity Data: Deploy 5-7 trackside power systems in high traffic rail hubs.

Annual Projected Emission Reductions							
Year	**2026**	**2027**	**2028**	**2029**	**2030**	**2025-30**	**2025-50**
MTCO2e	-	2,305	2,305	2,305	2,305	9,219	55,311

GHG Measure 3. Kickstarting Industry Decarbonization

Output: Support Retrofit of 10 Industrial Facilities

Performance Measure Description: This initiative is an industrial decarbonization concierge service that supports the decarbonization of 2 industrial facilities per year. It is likely that the program could serve more facilities, but for purposes of these GHG reduction calculations, we assume 2 per year.

GHG Reduction Estimate Method: Estimate number of facilities program can serve and multiply by GHG reductions per facility, with assumptions regarding facility size and associated GHG savings per facility.

Models/Tools Used: Costs and GHG reduction estimates taken from a 2011 US Department of Energy study, "Energy-Saving Opportunities for Manufacturing Enterprises."

Measure Implementation Assumptions: 80% of supported facilities are large, with GHG reductions averaging 12,000 MTCO2e, and 20% are small or medium, with reductions averaging 1400 MTCO2e.

GHG Reduction Estimate Assumptions: Emissions reductions figures from this study are conservatively discounted 15% to acknowledge that the study's age and that some industrial users may have implemented efficiency measures over this time.

Reference Case Scenario: Unaltered facilities as discussed in the 2011 US DOE study, with potential for GHG reductions discounted by 15%.

Measure-Specific Activity Data: Number of industrial facilities served.

Annual Projected Emission Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	16,796	33,592	50,388	67,184	83,980	251,940	1,931,549

Output: Replace 390 refrigerant systems

Performance Measure Description: Replace 390 refrigerant systems that use fluorinated gases (or "f-gases") with less polluting alternatives. The program will focus on the industrial food and beverage sector, particularly supermarket refrigeration systems.

GHG Reduction Estimate Method: The difference in GHG emissions was calculated between several models of commonly used refrigeration systems using R-404A refrigerant and similarly sized systems using less polluting refrigerants, R-744 and R-290. Assumptions were made about how many of each type of system would be replaced annually, and the reductions were summed.

Models/Tools Used: None.

Measure Implementation Assumptions: Incentives will be sufficient to entice food service providers to change refrigeration equipment. Replacements will be sought in the retail food service sector, likely supermarkets. Project costs are based on project data from California provided by the North American Sustainable Refrigeration Council.

GHG Reduction Estimate Assumptions: R-404A has a Global Warming Potential of 3922 and R-744 has a GWP of 1, while R-290 has a GWP of 3. GWP figures are from the California Air Resources Board. The leakage rate of 25% is from materials distributed by the U.S. EPA GreenChill program.

Reference Case Scenario: Use of R-404A refrigerant, with 25% leak rate, in all equipment.

Measure-Specific Activity Data: Replace 390 refrigerant systems over the 5-year program period.

Annual Projected Emission Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	566,452	566,452	566,452	566,452	566,452	1,699,356	13,028,400

GHG Measure 4. Expanding Climate-Smart Agriculture

Output: Add 230,702 acres of cover crops planted to existing programs and convert 324,000 acres to no-till agriculture

Performance Measure Description: This initiative expands Illinois' successful existing cover crop incentive program by an additional 230,702 acres and adds 324,000 acres to the state's no-till incentive program over the 5-years of the program.

GHG Reduction Estimate Method: GHG reductions are estimated by multiplying the additional acreage by the CO2 reduction from applying cover crops or converting to no-till agriculture.

Models/Tools Used: CO2 sequestration rates per acre are based on three scenarios conducted using the US Department of Agriculture's COMET-Planner Report.

Measure Implementation Assumptions: The offered incentive will be sufficient to entice farmers to plant cover crops.

GHG Reduction Estimate Assumptions: Three scenarios used assumed cropland in Champaign County, Illinois: (1) Converting intensive tilled land to no-till or strip-till, (2) converting reduced tilled land to no-till or stip-till, (3) converting reduced tilled land to no-till or strip-till and adding cover crops.

Reference Case Scenario: See three scenarios in GHG reduction estimate assumptions..

Measure-Specific Activity Data: Add 36,364 acres of cover crops planted to existing programs for each of the 5 program years and convert 324,000 acres to no-till agriculture.

Annual Projected Emission Reductions

Year	2025-26	2027	2028	2029	2025-30	2025-50
MTCO2e	349,085	180,662	180,989	185,943	896,677	896,677

Output: Adoption of 45,734 commercial electric lawn mowers

Performance Measure Description: Rebate program to spur replacement of almost 46,000 pieces of commercial gas-powered landscaping equipment with all-electric.

GHG Reduction Estimate Method: The MOVES4 tool model was used to estimate GHG emissions reductions for this program.

Models/Tools Used: Calculations for this section were conducted using the U.S. EPA Motor Vehicle Emission Simulator tool (MOVES4). Mark Janssen of the Lake Michigan Air Directors Consortium (LADCO) ran MOVES4 to generate average 2020 weekday activity and emission by month for lawn and garden equipment (LGE).

Measure Implementation Assumptions: Induce over 9,100 pieces of commercial electric landscaping equipment purchases per year during the 5-year program period. Over 45,000 of the pieces of equipment will be hand-held equipment with a $100 rebate, and remaining mowers will be mower-tractors with a much higher rebate.

GHG Reduction Estimate Assumptions: Assumptions built into the MOVES4 model.

Reference Case Scenario: Reference case built into the MOVES4 model.

Measure-Specific Activity Data: Adoption of 46,734 pieces of commercial electric landscaping equipment.

Annual Projected Emission Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	33,813	33,813	33,813	33,813	33,813	169,064	845,320

Output: Fund biomethane projects using approximately 5 million tons of solid waste

Performance Measure Description: This initiative would fund biomethane capture.

GHG Reduction Estimate Method: We used EPA's WARM model to estimate GHG emissions landfill methane capture with offsite use.

Models/Tools Used: Greenhouse gas reductions were calculated using the US EPA Waste Reduction Model (WARM).

Measure Implementation Assumptions: Cost assumptions for the project were taken from comparison of the 2021 NREL report "Select Food Waste Utilization Options."

GHG Reduction Estimate Assumptions: The analysis assumed 4,999,999 tons of mixed solid waste landfilled, located in Illinois, with the current mix of waste, with moderate moisture conditions, including emissions during transport with the default distances.

Reference Case Scenario: Emissions reductions were determined by first running a "business-as-usual" site with these assumptions that had no LFG recovery, then running the same site, but assuming it had LFG recovery which was recovered for energy (methane), using aggressive gas collection.

Measure-Specific Activity Data: Tons of manure processed.

Annual Projected Emission Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	236,453	236,453	236,453	236,453	236,453	1,182,265	5,911,323

GHG Measure 5. Keeping Clean Power Goals on Track

Output: Statewide Clean Energy Modelling

Performance Measure Description: The IPA would conduct a study to proactively identify clean energy resources to meet gaps in real or perceived energy needs, with the purpose of avoiding deviation from the state's emissions reductions schedule.

GHG Reduction Estimate Method: Estimate risk of Illinois' RTOs delaying statutory plant closures (55%), and associated emissions increases if that were to happen. Allocate those reductions based on a 2% chance that the study would allow Illinois to avoid delay in its statutory plant closure schedule.

Models/Tools Used: Statutory schedule for plant closures contained in IL state law.

Measure Implementation Assumptions: Study would result in a 2% chance of avoiding plant closure by identifying a pathway to avoid generation gap.

GHG Reduction Estimate Assumptions: 55% chance of the RTOs delaying these emissions reductions, and that the delay would be for only one year. Illinois' merchant power plants are scheduled to come offline in 2030 and 2045, so annual projections are not provided below.

Reference Case Scenario: Plant closures in Illinois face a 55% chance of one years' delay vs proceeding on the schedule set in statute.

Measure-Specific Activity Data: Study expected to be completed in 2026.

Annual Projected Emissions Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-50
MTCO2e	Plants are scheduled to close in 2030 and 2045.				181,188	181,188	233,065

Output: Small Utility Clean Energy Planning

Performance Measure Description: Municipal and rural electric cooperatives would undergo planning to proactively identify clean energy resources to meet gaps in real or perceived energy needs, with the purpose of avoiding deviation from the state's emissions reductions schedule.

GHG Reduction Estimate Method: Estimate risk of Illinois' RTOs delaying statutory plant closures (55%), and associated emissions increases if that were to happen. Allocate those reductions based on a 25% chance that planning would allow Illinois' municipal and rural electric cooperatives, who have direct control of their resource portfolios, to take action to avoid delay in its statutory plant closure schedule.

Models/Tools Used: Statutory schedule for plant closures contained in IL state law.

Measure Implementation Assumptions: Study would result in a 25% chance of avoiding plant closure by identifying a pathway to avoid a generation gap. Chance of action is higher here than in the statewide study because these utilities have direct control over their resource portfolio.

GHG Reduction Estimate Assumptions: 55% chance of the RTOs delaying these emissions reductions, and that the delay would be for only one year. There is one plant that could conceivably close before 2030 and another that is scheduled to reduce its emissions, but only in 2045. Because of the lumpiness of these possibilities, annual projections are not provided below.

Reference Case Scenario: Plant closures in Illinois face a 55% chance of one years' delay vs proceeding on the schedule set in statute.

Measure-Specific Activity Data: Planning processes to be undertaken by two small utilities each year.

Annual Projected Emissions Reductions

Year	2026	2027	2028	2029	2030	2025-30	2025-2050
MTCO2e	Plant closures are limited and so assigned to 2030 and 2045.					287,803	2,128,205