



PART 2: REPORT CARDS

The Report Cards provide progress updates and scores for actions and targets in the *LEC Plan* and *Corporate Climate Adaptation Strategy*. The following information is provided:

Action # and Action: direct reference to either the *LEC Plan* or *Adaptation Strategy*.

Start Date: indicates when the action needs to start by (as reported in the *LEC Plan* and *Adaptation Strategy*).

Responsible Department: Department leading work on the Action or Initiative.

Target Indicator: from the *LEC Plan* Milestone Targets that were established for each Action. Many of these are measurable and timebound. No target indicators exist in the *Adaptation Strategy*.

Other Indicators Being Considered: additional indicators to better assess the progress (or lack of progress) on the action/targets in the *LEC Plan* that are either being measured now or could be measured (not in the *Adaptation Report Card*).

Performance (against target): measurable performance towards the Target Indicators. TBD means data is not currently available. Undefined means the target is not defined in measurable terms.

Progress Update: a narrative update on what progress is being made, including rationale and plans for the next period.

Budget: indicates the capital and operating funds assigned to work on this action in the specified budget cycle. Some projects that began before 2020 may still be ongoing, but no new budget is shown. In other cases, the work was included within another project and not shown. The budget also includes any external funding that the City received.

Progress Score: Actions follow four phases before being completed. Progress scores for the *LEC Plan* and *Adaptation Strategy* are based on what phase the action is in and the colour indicates whether the action is on-track or behind-schedule.

LEGEND

| Phase/Timing Alignment | Description |
|-----------------------------|--|
| Not started ○○○○○ | Work has not started |
| Initiated ●○○○○ | Scoping/business case work is underway to seek funding |
| Development ●●○○○ | Capital funding is approved, research/study/feasibility/design/pilot work is underway to plan implementation |
| Implementation ●●●○○ | Implementation work is underway |
| Operations ●●●●○ | Sustained operating funding is approved for all activities required to meet the target/initiative, program/infrastructure/equipment is operating to meet the target/initiative |
| Complete ●●●●● | Target/initiative has been achieved |
| | Work is proceeding, or ahead of the LEC/Adaptation timeframe |
| | Work is behind the LEC/Adaptation timeframe |
| | Work is not scheduled to begin in the LEC/Adaptation timeframe |



2.1 CLIMATE MITIGATION REPORT CARD

Buildings and Energy Efficiency

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|---|----------------------|------------------------|--|
| 01 | Apply energy efficiency standards (built to Passive House) to all new municipal buildings. | 2020 | Technical Services | 100% of new municipal buildings meet the Passive House/Net-zero Energy-ready ³ standard immediately (2020). |
| 02 | Perform deep energy retrofits on municipal buildings. | 2022 | Facilities Management | 60% of existing municipal buildings in 2016 meet the Passive House/Net-zero Energy-ready standard by 2031, 100% by 2050. |
| 03 | Upgrade plugged appliances and energy conservation behaviours in municipal buildings. | 2020 | Facilities Management | 5% plug load energy savings from existing municipal buildings in 2016 by 2023. |
| 04 | Update all municipal building lighting systems. | 2019 | Facilities Management | 20% lighting energy savings from existing municipal office buildings in 2016 by 2026 and from all existing municipal buildings by 2051. |
| 05 | Retrofit municipal heating and cooling systems with ground-source or air source heat pumps. | 2020 | Facilities Management | 100% of existing municipal buildings in 2016 are retrofitted with heat pumps by 2026. |
| 06 | Create an electric and thermal energy consumption cap for new home construction by utilizing a municipal step code. | 2020 | Building Standards | Improve energy use intensity (EUI) and thermal energy demand intensity (TEDI) for new residential buildings, targeting net-zero ready by 2036. |
| 07 | Require new homes to include roof solar Photovoltaic (PV) installations in the final year of a municipal step code. | 2036 | Building Standards | New homes constructed in 2036-onward have roof solar PV. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|--|--|--|------------------------|------------------------|-------------------------------|
| # buildings that are not built to Net-zero Energy-ready | 0% Buildings built to Net-zero Energy-ready. | High Performance Civic Building Policy enacted 2022 and requires new buildings be Net-zero Energy-ready. Fire Hall Five is LEED Certified (not Passive House / Net-zero Energy-ready) ⁴ . No buildings have started the design phase since January 2022 (when policy passed). | \$75 | \$0 | Implementation ●●●● |
| TBD | 0% buildings completed deep energy retrofit (50%+ energy load reduction) | Funding was approved for a feasibility study in 2023 to inform phasing and design. | \$0 | \$225 | Development ●●●● |
| % appliances purchased not meeting minimum energy efficiency requirements (since 2016) | 0% plug load savings | No progress. An appliance inventory is planned to inform a business case for requesting funding for upgrades for the 2024-25 budget. | \$0 | \$473 | Not started ●●●● |
| Total GHG reductions from lighting improvement | TBD | Lighting retrofits completed in four more buildings and started in a fifth. Twelve buildings have been retrofitted to date under the current Energy Performance Contract Project. | \$0 ⁵ | \$0 | Implementation ●●●● |
| # of municipal heating systems replaced without heat pumps (since 2016) | 0% of buildings with heat pumps of all heated buildings | Secured funding for a two-year heat pump feasibility study with the University of Saskatchewan ⁶ . | \$0 | \$30 | Development ●●●● |
| % or # new buildings built to each tier of 2020 National Building code (once approved) | Undefined | Not approved to proceed. Provincial code consultation to begin in 2022. | \$0 | \$0 | Not started ●●●● |
| TBD | TBD | No progress. | \$0 | \$0 | Not started ○○○○ |

³ LEC Plan required Passive House, the High Performance Civic Building clarified that Net-zero Energy-ready with an air-tightness target is aligned with Passive House. Net-zero is in alignment with the Federal Government strategy.

⁴ Fire Station Five was in the design stage before the High Performance Civic Building Policy was enacted in January 2022, and therefore it was not required to be fully compliant with the Policy.

⁵ The Environmental Performance Contract (EPC) has a \$31M budget (\$20M loan plus \$11M from existing funding sources) for energy efficiency measures in civic buildings including lighting upgrades. It is expected to use approximately \$21M of this budget.

⁶ Additionally, work to consider and implement heat-pumps would be included in Action 01 – Deep Energy Retrofits for Civic Buildings.



Buildings and Energy Efficiency (Continued)

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|---|----------------------|------------------------|--|
| 08 | Create an electric and thermal energy consumption cap for new Industrial, Commercial and Institutional (ICI) construction by utilizing a municipal step code. | 2020 | Building Standards | Improve energy use intensity (EUI) and thermal energy demand intensity (TED) for new ICI buildings, targeting net-zero ready by 2036. |
| 09 | Require new ICI buildings to include roof solar Photovoltaic (PV) installations in the final year of a municipal step code. | 2036 | Building Standards | New ICI buildings constructed in 2036-onward have roof solar PV. |
| 10 | Incentivize and later mandate homeowners to perform deep energy retrofits. | 2020 | Sustainability | 50% of existing homes in 2016 are 50% more energy efficient by 2030, 90% by 2050. |
| 11 | Incentivize and later mandate ICI owners and operators to perform deep energy retrofits. | 2020 | Sustainability | 50% of existing ICI buildings in 2016 are 50% more energy efficient by 2030, 90% by 2050. |
| 12 | Require energy efficiency improvements in residential and ICI building lighting systems. | 2025 | TBD | 90% of existing residential and ICI buildings in 2016 have 5% greater lighting efficiency by 2030, 100% by 2050. All existing luminaires are replaced with energy efficient LED bulbs and systems. |
| 13 | Incentivize and later mandate homeowners to upgrade household appliances to energy and water efficient models. | 2040 | Sustainability | Appliances and water heaters in 50% of existing residential buildings in 2016 are upgraded by 2050. |
| 14 | Retrofit home heating and cooling systems with ground source or air source heat pumps. | 2025 | Sustainability | 30% of existing residential buildings in 2016 are retrofitted with heat pumps by 2030, 80% by 2050. |
| 15 | Retrofit ICI heating and cooling systems with ground source or air source heat pumps. | 2025 | Sustainability | Commercial building floorspace in 2016 is retrofitted with heat pumps by 2030, 80% by 2050. |
| 16 | Increase the efficiency of industrial processes. | 2040 | Sustainability | 50% energy savings from industrial processes by 2050 over 2016 levels. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|--|------------------------------|---|------------------------|------------------------|-------------------------|
| % or # new buildings built to higher tiers of National Building code (once approved) | Undefined | Not approved to proceed. Provincial code consultation to begin in 2022. | \$0 | \$0 | Not started ●●●●● |
| TBD | TBD | No progress. | \$0 | \$0 | Not started ●●●●● |
| TBD | TBD | HELP launched Sept 2021 with up to four years of funding. External funding and program enhancements were approved in 2022 ⁷ . | \$145 | \$13,750 | Implementation ●●●●● |
| TBD | TBD | Funding approved to research and design a program to incentivize energy retrofits in ICI buildings. Program to launch in 2023/2024 (behind schedule). | \$0 | \$375 | Development ●●●●● |
| TBD | TBD | No plans for mandating lighting improvements yet. Current programs are focused on incentives. | \$0 | \$0 | Not started ●●●●● |
| TBD | TBD | Funding approved for design of education/incentive programming of home energy efficiency (includes appliances). | \$0 | \$250 | Development ●●●●● |
| TBD | TBD | HELP offers loans and rebates for heat pumps (none awarded in 2021). Education is planned in 2022/23. | <see Action 10> | <see Action 10> | Implementation ●●●●● |
| TBD | TBD | Funding approved for research and design of an energy retrofit incentive program for ICI buildings (includes heat pumps). | \$0 | <see Action 11> | Development ●●●●● |
| TBD | TBD | Funding approved for research and design through Action 15 (includes industrial processes). | \$0 | <see Action 15> | Development ●●●●● |

⁷ HELP Program funding enhancements and incentives are funded from 2022-2026. The HELP Loan offerings were fully allocated in 2022, with no additional loan funding identified at the time of writing this report.



Transportation

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|--|----------------------|-----------------------------|--|
| 17 | Electrify the Municipal fleet over the near-term. | 2020 | Roadways, Fleet and Support | 100% of the Municipal fleet is electrified by 2030. |
| 18 | Electrify the Municipal transit fleet. | 2020 | Saskatoon Transit | 100% of the transit fleet is electric by 2030. |
| 19 | Implement a vehicle pollution pricing program in high traffic areas. | 2024 | Sustainability | 5% vehicle emissions reduction from high traffic areas over 2016 levels by 2026. |
| 20 | Increase transit routes and frequency through future updates to the Transit Plan. | 2019 | Saskatoon Transit | Shift 5% of personal vehicle trips to transit by 2030, 10% by 2050. |
| 21 | Electrify personal vehicles through incentive programs, education, and automotive dealer partnerships. | 2020 | Sustainability | 30% of new vehicle sales are electric by 2030, 90% by 2050. |
| 22 | Electrify commercial vehicles through incentive programs, education, and automotive dealer partnerships. | 2024 | Sustainability | 50% of new heavy truck sales are zero-emitting by 2030, 100% by 2040. |
| 23 | Fund and implement improved cycling and walking infrastructure to encourage active transportation. | 2019 | Transportation | 20% mode shift to active transportation by 2030, 30% by 2050. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|---|---|--|------------------------|------------------------|--------------------------------|
| % of new municipal fleet vehicles procured that are not electric | 1% fleet vehicles electrified | Funding approved for EV strategy development in 2022-23. Four pilot vehicles and two chargers purchased and operating. Expression of interest submitted for 20 electric pickup trucks. | \$200 | \$395 | Implementation ●●●●○ |
| % of new buses that are not electric | 0% transit vehicles electrified | One-year electric bus pilot concluded. Funding approved to purchase two electric buses. | \$114 | \$2,640 | Implementation ●●●●○ |
| TBD | TBD | No progress. | \$0 | \$0 | Not started ○●●●○ |
| TBD | 0% greater transit ridership per capita | Construction of a pilot BRT station started. Federal funding for entire BRT network delayed (expected in 2023). | \$500 | \$0 | Implementation ●●●●○ |
| % or # of total registered vehicles that are electric (0.2% or 477 EVs in 2021) | TBD | Funding approved for strategy development in 2022-23. EV chargers purchased for public charging pilot (installation expected in 2022). | \$100 | <see Action 17> | Development ●●●●○ |
| % of new heavy truck sales that are not electric | TBD | Funding approved for strategy development (includes commercial vehicles). | \$0 | <see Action 17> | Development ●●●●○ |
| % increase in active mode share | 12% active transportation mode share | Approval for 14th St, 31st St, Dudley St, and Victoria Ave bikeways; infill sidewalk strategy approved and construction started; traffic calming and sidewalk preservation funded through Municipal Economic Enhancement Program (MEEP); accessible curb ramp installations continue; Pedestrian and Cyclist Accommodation in Work Zones and Detours Policy approved. Downtown active transportation network on hold to coincide with downtown entertainment district and BRT. | \$1,105 | \$10,067 ⁸ | Implementation ●●●●○ |

⁸ Includes \$6,067M in capital funding and \$4M reallocated from other sources.



Waste

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|--|----------------------|----------------------------|---|
| 24 | Improve and expand waste management programs and services to increase reduction and diversion. | 2020 | Water and Waste Operations | <p>90% reduction and diversion of organics from the waste stream by 2050.</p> <p>95% reduction and diversion of plastic from the waste stream by 2050.</p> <p>90% reduction diversion of paper from the waste stream by 2050.</p> |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|---|--|--|------------------------|---|---|
| Waste diverted from the City Landfill (25% in 2021) | <p>14% residential diversion of organics</p> <p>13% residential diversion of plastic</p> <p>65% residential diversion of paper</p> | Bylaw 8310 amended (ICI regulation in effect 2022). Funding approved for feasibility study of landfill bans and multi-unit organics program development. Curbside organics collection to begin 2023. Recovery Park construction in-progress (opens 2023). Development of variable-rate garbage collection directed by Council. | \$10,724 | <p>\$2,118 (Capital)</p> <p>\$4,567 (operating)</p> | <p>Implementation</p> <p>●●●●○</p> |

Water Conservation



| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|---|----------------------|------------------------|--|
| 25 | Decrease water use through efficiency, monitoring, and leak reduction. | 2020 | Saskatoon Water | 5% reduction in water volume pumped by 2026 from 2016 levels. |
| 26 | Reduce residential and ICI water use through education programming and water efficiency incentive programs. | 2020 | Sustainability | <p>20% reduction in outdoor water use by 2050 from 2016 levels.</p> <p>30% reduction in indoor water use by 2050 from 2016 levels.</p> |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|-----------------------------------|--|--|------------------------|---|---|
| TBD | 2.5% less volume pumped | Deployment of AMI system is 90% complete. Two-year evapotranspiration-based irrigation pilot concluded in city parks. Capital and operating funding approved. Implementation underway. | \$670 | <p>\$380 (Capital)</p> <p>\$300 (operating)</p> | <p>Implementation</p> <p>●●●●○</p> |
| TBD | <p>41% more water used outdoors</p> <p>10.5% less water used indoors</p> | Water Conservation Strategy under development. Capital and operating funding approved. Program development started. | <see Action 25> | <see Action 25> | <p>Development</p> <p>●●●●○</p> |



Land Use

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|--|----------------------|--------------------------|---|
| 27 | Build complete, compact communities through infill development, mixed-use buildings, and compact housing. | 2020 | Planning and Development | 5% less residential floor area per dwelling than 2016 levels by 2035 and 25% by 2050. |
| 28 | Focus development on densification in previously developed areas, increasing the number of multi-family buildings. | 2020 | Planning and Development | 25% greater stock share of multi-family homes than 2016 share by 2050 for new builds. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|------------------------------------|------------------------------|--|------------------------|------------------------|--------------------------------|
| Floor area per dwelling per person | TBD | University Sector Plan approved and work began on the College Corridor Plan spring 2021. Corridor Collaboration Team formed to align and coordinate work amongst City departments. | \$2,000 | \$9,478 (operating) | Implementation ●●●●● |
| TBD | TBD | Corridor Infill Development team formed to respond to infill applications. | <see Action 27> | <see Action 27> | Development ●●●●● |

Energy Generation



| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|---|----------------------|----------------------------|---|
| 29 | Install solar PV systems on municipal buildings. | 2020 | Facilities Management | 24 MW of solar capacity on municipal buildings by 2026. |
| 30 | Install solar PV systems on municipal lands (Parcel M Project). | 2020 | Saskatoon Light and Power | 1 MW capacity solar system on Parcel M or similar land area by 2022. |
| 31 | Increase Landfill Gas Capture from the Saskatoon Landfill. | 2020 | Water and Waste Operations | 50% methane capture annually by 2026. |
| 32 | Encourage existing residential building owners and mandate new buildings to install solar PV systems. | 2020 | Sustainability | 10 MW of residential solar capacity installed by 2030, 50 MW by 2050. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|--|------------------------------|--|------------------------|------------------------|--------------------------------|
| #/% new buildings built without solar panels #/% municipal building roof retrofits without solar panels installed | 0 MW solar installed | Renewable and Low Emissions Energy Implementation Plan progressed (2022 completion). Consultant hired to complete a feasibility study on eight municipal buildings. Further pre-design studies and funding applications occurring in 2022. | \$180 | \$177 | Development ●●●●● |
| TBD | 0 MW solar installed | Feasibility study for the 2.2 MW Dundonald Solar Farm on Parcel M was completed and funding approved. Construction tender to be released in 2022. | \$0 | \$4,250 | Development ●●●●● |
| Renewable natural gas produced and used for heating and power production (7.51 MW) | 36% methane captured | Feasibility study and design contract for landfill gas expansion awarded and work began. Capture wells installed in 2020 and began producing and more are planned. Wastewater treatment plant biogas being used for heating to offset natural gas usage. | \$0 | \$8,600 | Implementation ●●●●● |
| TBD | 3.8 MW solar installed | HELP launched Sept 2021 with up to four years of funding. External funding approved in 2022 provides rebates for solar panels. | <see Action 10> | <see Action 10> | Implementation ●●●●● |



Energy Generation (Continued)

| # | Action | Start Date (planned) | Responsible Department | Target Indicators |
|----|---|----------------------|---------------------------|--|
| 33 | Encourage existing ICI building owners and mandate new buildings to install solar PV systems. | 2025 | Sustainability | 20 MW of ICI solar capacity by 2030, 200 MW by 2050. |
| 34 | Install new solar PV utility-scale facilities within or adjacent to city boundaries. | 2023 | Saskatoon Light and Power | 20 MW of utility-scale solar capacity by 2030, 300 MW by 2050. |
| 35 | Install a CHP facility at St. Paul's Hospital. | 2020 | NA | Two 540 kW CHP units installed at St. Paul's Hospital by 2023. |
| 36 | Implement district energy systems in the downtown and north downtown areas. | 2025 | Sustainability | (1) One RNG boiler (37 MW) installed in 2026, and a second installed in 2034. (2) One CHP unit (9.6 MW thermal, 10.5 MW electricity output) installed in 2034. (3) One CHP unit (6.4 MW thermal, 7.0 MW electricity output) installed in 2042. |
| 37 | Construct a hydropower plant at the weir. | 2020 | Saskatoon Light and Power | 6 MW of hydropower capacity at the weir, with an operational efficiency of 55% or greater by 2027. |
| 38 | Install renewable energy storage over time. | 2023 | Saskatoon Light and Power | 50 MW of grid-tied electricity storage is added gradually between 2025 and 2050. |
| 39 | Procure renewable electricity from third party producers. | 2040 | Saskatoon Light and Power | 1600 MW of renewable electrical capacity procured by 2050. |
| 40 | Procure renewable natural gas from third party producers. | 2040 | Sustainability | 50% of municipal natural gas demand displaced with RNG by 2050. |

| Other Indicators Being Considered | Performance (against target) | Progress Update | Budget 2020-21 (000's) | Budget 2022-23 (000's) | Progress Score 2021 |
|-----------------------------------|--------------------------------|--|------------------------|------------------------|----------------------------|
| TBD | <see Action 32> | Funding approved for the ICI Energy Efficiency and Energy Generation Project to research and design a program. | \$0 | \$375 | Development ●○○○ |
| TBD | 0 MW solar installed | No progress. | \$0 | \$0 | Not started ○○○○ |
| NA | NA | Project cancelled in 2020. | \$0 | \$0 | Cancelled ○○○○ |
| TBD | 0 boilers/CHP units installed | No progress. | \$0 | \$0 | Not started ○○○○ |
| TBD | 0 MW hydropower installed | On hold unless adequate funding and/or partnerships become available. | \$0 | \$0 | Not started ○○○○ |
| TBD | 0 MW of grid storage installed | Investigated through the Solar Farm Feasibility Study (Action 30) and determined not feasible at this time due to cost and lack of vendor/product certainty and standardization. | \$0 | \$0 | Not started ○○○○ |
| TBD | 0 MW procured | No progress. | \$0 | \$0 | Not started ○○○○ |
| TBD | 0% natural gas displaced | No progress. | \$0 | \$0 | Not started ○○○○ |