



Final Engagement Report

Renewable and Low Emissions Energy Implementation Plan
October 19, 2022



Engagement Summary

The City of Saskatoon (City) is developing a long-term, city-wide [Renewable Energy and Low Emissions Implementation Plan](#) (Plan) to switch to low carbon energy sources. The Plan will present the status, conditions, and challenges for renewable energy in Saskatoon as well as provide an action plan showing the near and long-term actions recommended to meet energy-related targets from the [Low Emissions Community Plan](#). The development of this multi-year plan and suite of corporate and community programs will potentially lead to an increase in renewable energy uptake and support within Saskatoon.

From January 2021 to July 2022, City Administration engaged the community in the development of a long-term plan. Based on what we heard, a [Triple Bottom Line](#) review, best practise research and internal funding considerations, City Administration has developed a comprehensive implementation plan that will be presented to City Council in 2022.

During the development of the Plan, the City [engaged the community](#) through three phases:

Phase 1: Options Identification

- Identify renewable energy initiatives that may work in Saskatoon
- Identify opportunities and barriers associated with the Plan and proposed programs

Phase 2: Selecting Preferred Initiatives

- Identify community preferences to help inform the selection of recommended programs
- Prioritize recommended programs
- Further identify new program elements that enhance opportunities and mitigate barriers

Phase 3: Follow-up on What We Heard

- Share components of the Plan and recommended programs to identify concerns
- Validate key findings with the community

This engagement summary includes the activities and results that informed the engagement goals for the project. A total of 884 participants took part in the engagement activities, including various meetings and surveys. Engagement goals, intended audiences, activities, dates, participation rates and detailed engagement results are provided in the Comprehensive Engagement Report that follows this summary. Engagement results from all activities that informed each goal are summarized below.

Support for Renewable Energy

When asked how important transitioning our current energy supply towards more renewable energy options was, the majority of respondents felt it to be extremely important (70%) followed by somewhat important (15%). Out of the reasons provided for why renewable energy is important, respondents identified the following as being the most important:



1. Reducing greenhouse gas (GHG) emissions (75%)
1. Caring for the environment (75%)
3. Climate change resiliency (68%)
4. Long-term energy savings (56%)
5. Job creation and economic growth (53%)
6. Renewable energy is not important to me (6%)

Opportunities in Renewable Energy

Most Subject Matter Experts identified significant potential for renewable energy use in Saskatoon and supported its development. Virtual net metering was identified by Subject Matter Experts as a major step towards making site-scale renewable energy more accessible and in increasing community support. Participants representing the business and industry, commercial, and institutional (ICI) community stated that sectors would likely move towards renewable energy if more information on the opportunities was available, benefits could be realized, and return on investments were profitable.

Overall, participants extended their support for developing the Plan and what the City has done for emission targets, stating they act as a report card for determining where we are at.

Barriers to Renewable Energy

Out of the proposed barriers to community-wide renewable energy adoption, respondents identified the following in order of their importance:

- 
1. *Project costs* – renewable energy systems require significant capital investment (63%)
 2. *Return on investment* – savings or revenue generation may be low and result in a long payback period (61%)
 3. *Limitations to selling power* – there are limited opportunities to sell power at a larger scale (43%)
 4. *Access to capital* – limited availability for loans and capital funds to support renewable energy projects (34%)
 5. *Knowledge and Awareness* - the benefits are not well understood and there is little accessibility to resources and tools (23%)

Other barriers suggested by participants included a lack of understanding on how our energy generation and distribution systems work, failure of leadership to lead by example and be innovative, uncertainty of the effectiveness of renewable energy, and the lack of data on the utility costs and return on investment.

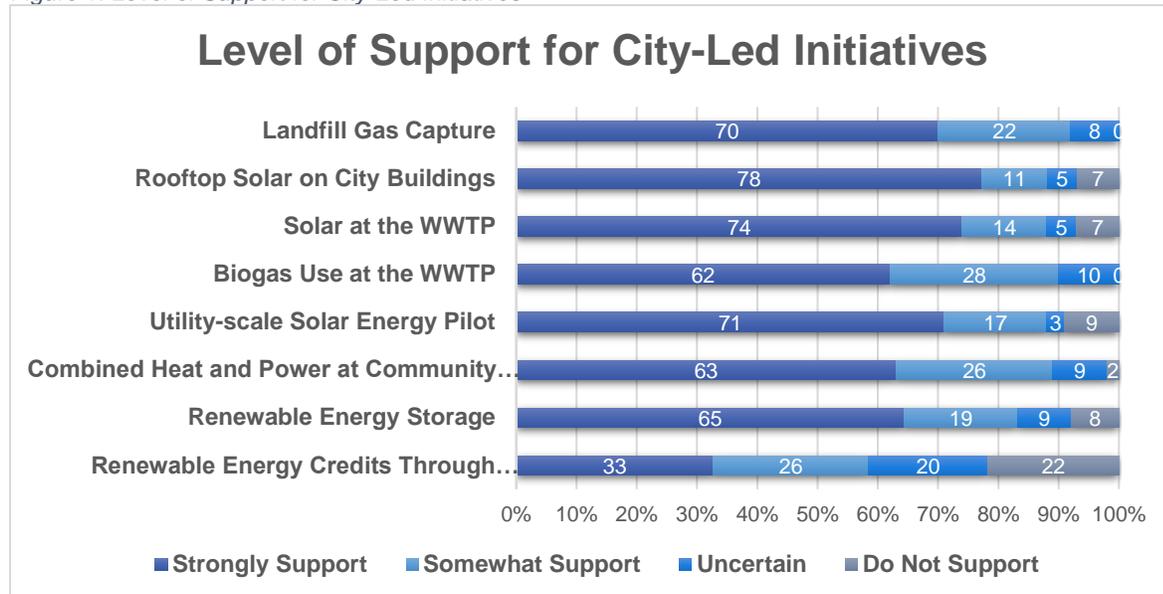
Our Role in Renewable Energy – Leading By Example

The majority of respondents supported the City playing a role in the energy sector (84%), with only 12% stating that the City should not. When respondents were asked whether the City should set its own renewable energy targets, 76% stated “Yes” followed by 16% stating “No”.

Most participants strongly supported Landfill Gas Capture due to the initiative being one of the better ways to quickly reduce our contribution to GHG emissions. Solar energy received conflicting feedback within the comments, with some participants strongly promoting its use as a transition towards more sustainable energy production and others viewing it as an expensive method to getting marginal emissions reductions. Both Combined Heat and Power at Civic or Community Facilities and Renewable Energy Storage were viewed as lacking in technology and unbeneficial when compared to other City-led initiatives. The Purchasing of Renewable Energy received the lowest support from participants, primarily due to the perceived additional costs and many respondents indicating a mistrust for SaskPower.

Out of the proposed City-led programs being explored, respondents supported the proposed initiatives in the following ranking:

Figure 1: Level of Support for City-Led Initiatives



Within the comments many participants called on the City to implement all the initiatives in a timely manner to combat the impacts of climate change. Participants called on the City to lead by example by demonstrating the viability of clean energy, efficiency measures, and electrification to build confidence in the community. Some participants suggested more information is needed on the associated emissions and environmental impacts before their level of support could be determined.

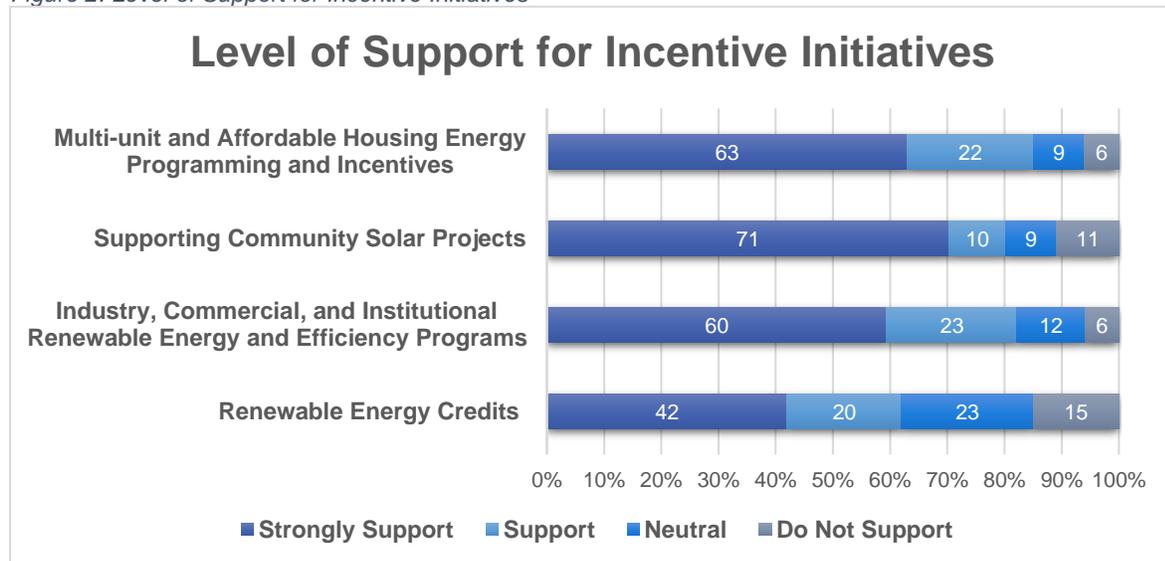
Our Role in Renewable Energy – Investor

Participants expressed the need for strong incentives to implement projects within the community, and costs were viewed as being the largest barrier for uptake. Incentives should not just be targeted towards those who can already pay for the project, but rather towards renters, low-income residents and structurally excluded groups, centering equity, opportunity, and energy security in the design of incentive programs. The City’s Home Energy Loan Program (HELP) was generally viewed as a benefit in making the considerable investment for homeowners more feasible.

When asked whether a city-wide rebate/grant program for solar PV installation that was facilitated by the City would be beneficial, most respondents stated it would be (57%). Rebates were generally viewed as beneficial for the community. Respondents provided suggestions for other renewable energy incentive programs they felt the City should be considering, including promoting renewable energy co-operatives, incentivizing property owners to install wind and solar on their buildings, and paying out supplemental generation.

Participants were asked whether they thought renewable energy generation was still worth the investment for their home or business considering the costs and long payback periods. Most participants stated it was worth investing in renewable energy (55%). When asked to identify their level of support for the various proposed incentive initiatives, participants provided the following:

Figure 2: Level of Support for Incentive Initiatives



Although Multi-unit and Affordable Housing Energy Programming and Incentives was supported, participants noted that these programs may not be as effective since the control and ability to participate remains with the landlord and not the renter, which could create more conflicts between these groups. Supporting Community Solar received similar conflicting views shared in the comments for City-Led Initiatives; however, many participants felt that the program could potentially provide the largest return on investment by essentially putting the power in the hands of the public. Some participants disagreed with providing incentives for the ICI sector since they felt this sector should be held accountable and be responsible for their impacts to the environment. It was suggested that funding could be better allocated towards mandating and enforcing the ICI sector to be accountable in following city-wide emissions standards. Many participants were confused about Renewable Energy Credits since they are often not helpful in creating behavioural changes within the community and may not hold residents/businesses accountable for their own actions.

Our Role in Renewable Energy – Regulator

Respondents ranked the following proposed regulation and policy initiatives in order of their support:



1. Solar administration process (86%)
2. Renewable energy development standards (78%)
3. Solar easement policy (70%)

Numerous participants asked why there were not mandates for renewable energy in the City's development standards since mandates need to be followed while recommendations are often ignored by developers. Participants also noted the importance of considering solar access, which has the potential to conflict with the protection of Saskatoon's urban forest.

Our Role in Renewable Energy – Encourager

When asked to state their level of support for the proposed education and awareness initiatives, participants provided the following ranking:



1. One-stop-shop website (83%)
1. Solar mapping tool (83%)
3. Home/building energy rating and disclosure (82%)
4. Sharing success stories (80%)
5. Training, workshops, or coaching sessions (75%)

Participants were also asked to identify what they believed were the best ways to educate the community about renewable energy programs from a proposed list of educational initiatives, including:



1. Information on your electricity bill (76%)
2. Energy savings calculator (74%)
3. Energy audits and walkthroughs (59%)
4. School programming and resources (53%)
5. At public events and through informational booths (41%)

When asked how important education is in helping to spur renewable energy in Saskatoon, most participants stated it was very important. However, numerous participants suggested that education programs can only succeed with corresponding policy changes. The combination of educational and policy changes drives the community to realize they too have a role and have the tools to make the changes needed.

Educational gaps for renewable energy were identified, including how individual actions can lead to change, providing a trustworthy source of information that debunks misinformation, providing opportunities to see renewable energy use in action, and what steps are involved in implementing a renewable retrofit.

Final Considerations

Participants favored prioritizing larger renewable energy initiatives (City-led) first (44%), followed closely by supporting larger renewable energy initiatives and self-generation in the community (39%).

When asked for any additional comments, participants provided the following main themes:

Costs: participants called on the City to be upfront about the costs of each initiative and in providing information on their total life cycle; some participants would prefer for the proposed initiatives to not be funded due to the potential increase in their property taxes

Equity: participants stressed the need for the City to incorporate an equitable lens in the future implementation of all initiatives; low-income neighbourhoods should not be affected by the costs to fund these initiatives

Immediacy: many participants stressed that the impacts of climate change are being felt now and that Saskatoon needs to implement effective initiatives to combat rising emissions and their impacts on our environment

Support: many participants stated their support for the City in exploring renewable energy within Saskatoon and for the proposed initiatives; participants called for a paradigm shift in how

Saskatoon can use renewable energy to reduce our emissions, create a better economy, and improve our environment

Utility provider: many participants expressed their concern that SaskPower plays a critical role in our province's energy future, but they are not doing enough to reduce emissions and meet targets; there is also a lot of frustration within the community surrounding the changes to the net metering program in 2019

Consideration of Results

Results from all engagement activities were considered, alongside internal considerations and best practice research, in the development of the Plan. Specific examples of how the results shaped the design of the Plan include:

Better Understanding Renewable Energy

We heard that it is difficult for the community to explore renewable energy when residents do not fully understand the benefits nor opportunities. To address these concerns, communications and education campaigns will be explored through the City's Home Energy Loan Program to ensure all residents are aware of the opportunities for renewable energy within Saskatoon.

Comprehensive List of Initiatives

Engagement showed there was support within the community to pursue most of the suggested renewable and low-emissions energy initiatives, and that not one action was distinctly superior nor sufficient on its own. The Plan has consequently presented the top actions in a similar way to convey their equal importance and their need to be acted upon, or that a similar action with comparable emissions reductions would replace the action if insufficient.

Education

The Plan identifies what information is needed to encourage energy education in the community, such as a lack of understanding on the available options. This information and the initiatives have been informed by the engagement results and will be used in future education and awareness campaigns.

End-of-life waste management

Because of concerns raised by the public on the end-of-life management of renewable energy waste, such as solar PV panels and batteries, the implementation plan has included an initiative to establish a local recycling option for these materials as they approach their end-of-life.

Equity and inclusion

We heard that equity and inclusion should be considered and included in the future implementation of the initiatives. The following options were proposed to alleviate some of these concerns:

- Explore renewable energy incentives for owners of affordable and rental housing
- Implement programs to educate renters and property managers about the opportunities for renewable energy initiatives
- Committing to future public engagement as programs are developed

This feedback will be incorporated into specific initiatives, and the City will use tools such as [Equity Toolkit for Projects](#) to guide this work.

Initiative-specific considerations

Much of the feedback collected throughout the engagement process was specific to the implementation of the initiatives and will be incorporated into their future development.

Leading by Example

We heard that the City should be a model for the community to follow for renewable energy adoption in Saskatoon by saving energy and improving efficiencies internally first. Therefore, the Plan outlines and prioritizes numerous internal initiatives for the City.

Self-generation Affordability and Accessibility

Many respondents expressed the need for further support in generating their own renewable energy. The Plan includes an initiative to explore rebates as incentives, as well as incentives to encourage community solar, to ensure there is support and access for residents that would like to participate in the switch to low-emissions energy.

Contents

Engagement Summary	2
Contents	9
List of Tables	10
List of Figures	10
1 Background.....	11
1.1 Strategic Goals	11
1.2 City Project Team	12
1.3 Spokesperson(s).....	12
1.4 Summary of Engagement Strategy	12
1.5 Participants.....	13
1.5.1 Low Emissions Community Plan Stakeholders	13
1.5.2 Community	13
1.5.3 Impacted Groups	14
1.5.4 Subject Matter Experts.....	14
2 Engagement Activities.....	16
2.1 Meetings.....	16
2.1.1 Intended Audience	16
2.1.2 Marketing Techniques.....	16
2.1.3 Analysis	16
2.1.4 What We Heard	16
2.2 Survey	20
2.2.1 Intended Audience.....	20
2.2.2 Marketing Techniques.....	20
2.2.3 Analysis	21
2.2.4 What We Heard	21
2.3 Community Survey.....	24
2.3.1 Intended Audience.....	24
2.3.2 Marketing Techniques.....	25
2.3.3 Analysis	25
2.3.4 What We Heard	25
2.4 Meetings.....	29
2.4.1 Audience.....	29

2.4.2	Marketing Techniques.....	29
2.4.3	Analysis	29
2.4.4	What We Heard	29
2.5	Follow-up on What We Heard Survey	30
2.5.1	Intended Audience.....	30
2.5.2	Marketing Techniques.....	30
2.5.3	Analysis	30
2.5.4	What We Heard	31
3	Evaluation of Engagement	39
3.1	Survey Evaluations	39
3.2	Informal Feedback	40
3.3	Data Limitations	40
3.4	Opportunities for Improvement.....	41
4	Next Steps	43

List of Tables

Table 1: Summary of Engagement Strategy.....	12
Table 2: Summary of Engagement Activities.....	13

List of Figures

Figure 1: Level of Support for City-Led Initiatives – Close the Loop	4 & 31
Figure 2: Level of Support for Incentive Initiatives – Close the Loop	5 & 34
Figure 3: Level of Support for City-Led Initiatives	22
Figure 4: Whether Renewable Energy is Worth the Investment	33
Figure 5: Prioritizing Community and City-Led Initiatives.....	35
Figure 6: Evaluation of Phase 3 Survey Results.....	38

1 Background

The City of Saskatoon (City) has developed a long-term, city-wide [Renewable Energy and Low Emissions Implementation Plan](#) (Plan) to switch to low carbon energy sources. There are many reasons for the City to invest in renewable and low-emissions energy, including:

- With improvements to operations and technology, such as switching to electric vehicles, and improved building insulation permitting the use of electric heating, there will be an increased demand on the electricity grid
- To meet our emissions reduction targets, the electricity grid will need to be powered by renewable and low-emissions energy sources
- To maintain alignment with the [City of Saskatoon 2022-2025 Strategic Plan](#); in particular, its goal of Environmental Sustainability, which includes the outcome “Greenhouse gases are reduced in a way that maximizes co-benefits and doesn’t leave anyone behind”.

The Plan presents the status, conditions, and challenges for renewable energy in Saskatoon. Program outcomes included engaging the community on the viability of renewable energy opportunities, determining their associated state of readiness and costs, developing a prioritized list of recommended renewable energy initiatives, and determining how they should be implemented. The development of this multi-year plan and suite of corporate and community initiatives will potentially lead to an increase in renewable energy uptake and support.

This work stems from the 2019 Business Plan and Budget Deliberations, where City Council approved funding for an Integrated Solar and Renewable Energy Strategy with the purpose of identifying and prioritizing renewable energy opportunities for the community and corporation to meet the actions from the [Low Emissions Community Plan](#). While most of the Low Emissions Community Plan actions and targets refer to solar energy, this Plan presents other renewable energy technologies including wind, geothermal, and hydroelectricity, as well as low-emissions energy solutions, such as waste-to-energy, and nuclear energy, for consideration as alternatives to meet emission-reduction targets, as required. It also compares the financial, environmental, and social impacts of the various renewable energy options and prioritizes them for City Council.

From January 2021 – July 2022, City Administration engaged the community on relevant components of the Plan. Based on the feedback we received, in addition to further research and internal considerations, City Administration has developed a comprehensive implementation plan that will be presented to City Council in 2022. Future engagement will be completed as needed as specific initiatives are implemented.

1.1 Strategic Goals

The Plan aligns with the [City of Saskatoon 2022-2025 Strategic Plan](#); in particular, its goal of Environmental Sustainability, which includes the outcome “*Greenhouse gases are reduced in a way that maximizes co-benefits and doesn’t leave anyone behind*”. The key actions to achieve this outcome include:

- Implement climate actions in the Low Emissions Community Plan and the Corporate Adaptation Strategy within proposed timeframes

- Develop initiatives to increase the use of renewable energy or low emissions energy sources and promote opportunities for property owners to generate their own electricity from renewable sources.

1.2 City Project Team

- Jeanna South, Director, Sustainability
- Amber Weckworth, Project Supervisor, Sustainability
- Pam Groat, Project Engineer, Sustainability
- Kathryn Theede, Manager, Energy & Sustainability Engineering, Sustainability
- José Cheruvallath, Manager, Metering & Sustainable Electricity, Saskatoon Light & Power
- Gabriella James, Accounting Coordinator, Finance
- Leighland Hrapchak, Marketing Coordinator, Communications & Public Engagement
- Megan Evans, Marketing Consultant, Communications & Public Engagement
- Kenton Lysak, Engagement Consultant, Communications & Public Engagement

1.3 Spokesperson(s)

- Jeanna South, Director, Sustainability
- Amber Weckworth, Manager Climate, Strategy and Data, Sustainability

1.4 Summary of Engagement Strategy

Participants were provided the opportunity to inform the following engagement goals:

Phase 1: Options Identification

- Identify renewable energy initiatives that may work in Saskatoon
- Identify opportunities and barriers associated with the Plan and proposed programs

Phase 2: Selecting Preferred Initiatives

- Identify community preferences to help inform the selection of recommended programs
- Prioritize recommended programs
- Further identify new program elements that enhance opportunities and mitigate barriers

Phase 3: Follow-up on What We Heard

- Share components of the Plan and recommended programs to identify concerns
- Validate key findings with the community

A summary of participants, level of influence, engagement objectives, engagement goals and engagement activities completed are provided below.

Table 1: Summary of Engagement Strategy

Phase	Participants	Level of Influence	Engagement Objective	Engagement Goal	Engagement Activities
1	Impacted Groups Subject Matter Experts	Collaborate /Involve	Identify renewable energy initiatives and corresponding opportunities and barriers	Options Identification	Correspondence Meetings Survey
2	Community Impacted Groups Subject Matter Experts	Involve	Identify preferences, prioritize programs, and find opportunities to mitigate barriers	Selecting Preferred Initiatives	Correspondence Meetings Survey

3	Community Impacted Groups Subject Matter Experts	Involve	Share components of Plan to identify concerns and validate programs	Follow-up on What We Heard	Survey
---	--	---------	---	----------------------------	--------

* Correspondence refers to emails, phone calls, and virtual meetings with participants

A summary of engagement activities selected, activity and event dates, intended audiences, and number of participants engaged for each engagement goal is provided in the table below.

Table 2: Summary of Engagement Activities

Phase	Participants	Activity	Timeframe	Participants
1	Impacted Groups/Subject Matter Experts	Meetings	April to May 2021	46
	Impacted Groups/Subject Matter Experts	Industry Survey	April to May 2021	58
Subtotal				104
2	Community	Community Survey	May to June 2021	508
	Impacted Groups	Meetings	June 2021 to Sept. 2022	32
Subtotal				540
3	All participants	Community Survey	June to July 2022	240
Subtotal				240
Total Participation from April 2021 to July 2022				884

Engagement activities, participants, marketing techniques, analysis methods and results are described in this report, followed by a summary of evaluation feedback and data limitations.

1.5 Participants

The participants and organizations outlined below were identified due to their knowledge, interest in, or their potential to be impacted by the Plan. Not all of those listed below may have participated; however, all of those listed were invited to participate through at least one of the engagement activities.

1.5.1 Low Emissions Community Plan Stakeholders

Organizations engaged during the development of the Low Emissions Community Plan were invited to be engaged on future Low Emissions Community Plan initiatives, including this Plan. If the identified stakeholders showed interest in engaging, they were assigned to the most relevant group described below.

1.5.2 Community

Everyone who lives in Saskatoon will have the potential to participate in renewable energy initiatives once implemented. Engaging with the community will enable the City to better develop educational materials, strategic communications and future engagement activities that are inclusive to the community.

- Businesses
 - Business Improvement Districts
 - Greater Saskatoon Chamber of Commerce
 - North Saskatoon Business Association
- Carshare – Renewable Rides
- Community associations

- Industrial, commercial, and institutional sector
- Low-income residents and organizations
- Property Managers
- Renters of Saskatoon and Area
- Residents

1.5.3 Impacted Groups

Those who may be disproportionately impacted by the implementation of the Plan and its corresponding initiatives, including:

- Environmental advocacy
 - Climate Justice Saskatoon
 - Fridays for Future Canada
 - Saskatchewan Light Pollution Abatement Committee
- Indigenous organizations
 - Central Urban Métis Federation Inc.
 - Saskatoon Tribal Council
 - Cress Housing Corporation
- Industry professionals:
 - Building operators
 - Electricians
 - Developers and home builders
 - Saskatoon & Region Home Builders Association
- Waste management organizations

1.5.4 Subject Matter Experts

Those with experience or knowledge related to renewable energy and its applications. Subject Matter Experts include:

- City Administration:
 - Building Standards
 - Facilities
 - Permitting
 - Planning and Development
 - Recovery Park Project
 - Recreation and Community Development
 - Saskatoon Land
 - Saskatoon Light and Power
 - Saskatoon Water
- Renewable energy and community experts:
 - Distributed Energy Association of Saskatchewan
 - Energy managers from other jurisdictions
 - First Nations Power Authority
 - Saskatoon Energy Management Taskforce
 - Saskatchewan Environmental & Industry Managers Association
 - Saskatchewan Environmental Society

- Solar Co-operative
 - Sask EV
- Renewable energy installation companies:
 - Biomass
 - Hydro
 - Geothermal
 - Solar
 - Wind
- SaskEnergy
- SaskPower
- University of Saskatchewan
 - School of Environment and Sustainability
 - Office of Sustainability

Engagement with all participants aimed to be inclusive in terms of neighbourhood, age, gender, marital status, family size, culture, citizenship, income, etc.

2 Engagement Activities

Participants provided their feedback through surveys, meetings, or by contacting the project team directly. All engagement activities are described in further detail below.

2.1 Meetings

From April 13th to May 12th, 2021, various meetings were held with identified participants. The meetings included a short presentation that introduced the Plan and initiatives being proposed followed by a series of discussions. Due to their larger audience size, participants from the Energy Management Task Force were asked a series of questions to help prioritize the proposed initiatives within the Plan.

2.1.1 Intended Audience

Participants included specific Low Emissions Community Plan Stakeholders, Impacted Groups, and Subject Matter Experts. Participants included the following:

- Business Improvement Districts
- City of Regina
- Distributed Energy Association of Saskatchewan
- Energy Management Task Force
- Federated Co-operatives Limited
- First Nations Power Authority
- Greater Saskatoon Chamber of Commerce
- North Sector Business Association
- Pioneer Solar
- Saskatchewan Environmental Society
- SaskEnergy
- SaskEV
- SaskPower
- University of Saskatchewan

2.1.2 Marketing Techniques

No marketing techniques were employed for these activities. Participants were contacted individually by the project lead and engagement consultant to organize meetings.

2.1.3 Analysis

Meeting notes were provided by the project lead and engagement consultant, which the engagement consultant analyzed using mixed methods. Qualitative methods included a thematic analysis and open coding of responses to identify key concepts.

Quantitative results from the meeting with the Energy Management Task Force were analyzed for average support and overall trends to help with the prioritization of initiatives.

2.1.4 What We Heard

A total of 46 participants from 14 different organizations participated in the meetings.

Interest and Opportunities in Renewable Energy

Most respondents identified significant potential for renewable energy use in Saskatoon and supported its development. Virtual net metering was viewed as a major step towards making renewable energy more accessible and in increasing community support. Other suggestions for opportunities provided by participants included creating more opportunities for the community to be involved/partner, provide benefits to low-income housing initiatives, and standardize policies and initiatives to approach challenges and solutions creatively.

Participants representing the business and industry, commercial, and institutional (ICI) community stated that sectors would likely move towards renewable energy if more information on the opportunities was available, benefits could be realized, and return on investments were profitable. For many businesses, there needs to be a “bottom-line reason” for moving towards renewable energy, or it needs to improve their optics amongst their customer base. Participants indicated that there needs to be a multi-phased approach in introducing renewable energy into Saskatoon to allow the community time to adjust to this paradigm shift.

Overall, participants extended their support for developing the Plan and what the City has done for emission targets, stating they act as a report card for determining where we are at. This kind of awareness is important for future success and celebrating our achievements. It was stated that if proper goals are set the community and leaders become more ambitious to succeed; therefore, the City should strive for what is “moderate, measurable and meaningful” when setting targets and designing programs.

Barriers to Renewable Energy

Numerous barriers to renewable energy generation and use in Saskatoon were provided, including the following:

Costs: the installation and maintenance costs do not justify their use; renewable options can appear to be a cheaper solution but once supplemental and operational costs are incorporated it becomes more difficult to justify the total costs; offering incentives will inevitably increase municipal taxes which is a concern for many community members; participants noted that investing in renewable energy is costly and utility providers cannot assume all the costs for the premiums without passing them onto their customers

Education gap: the lack of energy literacy within the community stifles initiatives before they can be further explored; there is an overall lack of understanding surrounding the benefits and opportunities for renewable energy; the City needs to frame the discussion in terms of costs versus benefits

Renewable energy intermittency: one of the largest barriers for renewable energy adoption is the high seasonal volatility and how generation does not match peak electricity demand; solar power generation occurs mainly in the summer, however electricity demands are at their highest during winter nights when solar generation is at its lowest

Simple: the City needs to make it easy to participate in the proposed programs; have turn-key suppliers available that are a one-stop-shop for services

Utility provider: many participants expressed their concern that SaskPower plays a critical role in our province’s energy future but feel they are not doing enough to reduce emissions and meet

targets; there is also a lot of frustration within the community surrounding the changes to the net metering program in 2019

Our Role in Renewable Energy – Leading By Example

When presented with the proposed City-led programs and initiatives, most participants were supportive and commended the City for leading the movement towards renewable energy in a meaningful way. Numerous participants reiterated the need for the City to lead by example to spark interest in the community in taking on similar initiatives.

When asked to rank their support for the City-led initiatives, the Energy Management Task Force provided the following based on their average score out of five:



1. Site-scale solar on municipal buildings (4.5)
2. Energy storage and renewable energy procurement (3.6)
3. Utility-scale solar (2.9)
4. District energy and CHP (2.8)
5. Hydropower at the Weir (2.4)

Participants identified there is a lot of potential in wind generation due to it being cost effective by the strong and consistent prairie winds patterns; however, the barriers to wind generation included the potential for too much wind generation with not enough load as well as the challenges in storing this energy for later use.

Many participants supported landfill gas expansion and suggested including wastewater treatment and other renewable natural gas opportunities. Gas produced through landfill and wastewater treatment processes can either be converted into biomethane and used in vehicles to generate credits through the national Clean Fuel Standard or they can be blended into the natural gas system in conjunction with SaskEnergy.

Opinions on hydropower at the Saskatoon Weir varied greatly, with some participants in direct opposition to the project and others highly supportive. Those that opposed the project stated it was too small-scale to benefit the City, the project was not economically beneficial to pursue, and expressed their apprehension for the structural integrity of the Saskatoon Weir. Those in support were excited about the tourism/leisure opportunities the site could provide and the potential for the site to be a destination in Saskatoon.

Some participants were in favour of district energy and combined heat and power systems, stating there is a lot of potential within this industry to combine geothermal wells and distribute heat across communities. The challenge is having enough wells available to heat and cool the number of buildings, which can drastically increase capital costs unless it is offered as a utility service to the surrounding developments.

Our Role in Renewable Energy – Investor

Participants expressed the need for strong incentives to implement projects within the community, and costs were viewed as being the largest barrier for uptake. This is especially important in the residential sector, where the distribution of wealth varies greatly. Incentives should not just be targeted towards those who can already pay for the project, but rather towards renters, income-qualified and structurally excluded groups, centering equity, opportunity, and energy security in the design of incentive programs.

Rebates were generally viewed as beneficial for the community, but it was recognized that the costs associated with renewable energy technologies have reduced considerably over the last decade. Rebates also have benefits over net-metering since they are more accessible to all income groups and more marketable to the community. When asked whether a City-wide rebate/grant program for solar PV installation would be of benefit, most participants stated that it would.

The City's Home Energy Loan Program was generally viewed as a benefit in making the considerable investment for homeowners more feasible. It was suggested that the City should have the necessary capital available in case some participants default on the financing program.

Suggestions for other financial incentive programs included incentives being offered on a declining scale to decrease City spending over time, incentives tailored towards the business community and low-income residents, and incentives for new builds to install hook-ups for solar panel systems.

Our Role in Renewable Energy – Regulator

Numerous participants asked why there were not mandates for renewable energy in the City's development standards. It was suggested that mandates would establish requirements that would need to be followed rather than providing suggestions that would often be ignored. Mandates also have the potential to bring in more progressive contractors/developers that want to distinguish themselves by reducing their environmental footprint.

When asked to rank the proposed policies and bylaws, the Energy Management Task Force provided the following ranking out of five:



1. Streamlined solar administration (4.6)
1. Renewable energy development standards (4.6)
3. Solar easement policy (4.3)
4. Land-use planning (3.5)

Our Role in Renewable Energy – Encourager

When asked how important education is in helping to spur renewable energy in Saskatoon, most participants stated it was very important. It was suggested that having a better-informed community would not only increase uptake in renewable energy, but also normalize its use across the community and improve the uptake of other sustainable City initiatives. However, numerous participants suggested that education programs can only succeed with corresponding policy changes. The combination of educational and policy changes drives the community to realize they too have a role and have the tools to make the changes needed. It was suggested that providing developers with educational opportunities allows them to adhere to policy changes more easily and act on their own.

When asked to rate the following educational tools, the Energy Management Task Force provided the following:



1. Information on your electricity bills (7.9)
2. Home/Building Energy Rating and Disclosure (7.7)
3. Solar and Energy Mapping Tool (7.2)
3. "One-Stop-Shop" Website (7.2)
5. Sharing Success Stories (7)

6. Training, Workshop or Coaching Sessions (6.3)
7. Public Pamphlets and handouts provided at Civic Centre (2.8)

To improve community awareness, participants proposed the following actions:

Framing the discussion: information must be applicable to all of Saskatoon's demographics and what they are looking for; the community will base their decision on how easy it is and how much it will save them; education should focus on what the community can do to change their behaviours; tailor the information to residents and the business community differently

Partnerships: identify other organizations that can support/promote the initiatives; many solar companies have invested interest in educating the community; partner with school divisions to integrate educational material into their curriculum

Showcasing success: sharing success stories within the community has been shown to promote greater awareness by communicating the opportunities and impacts of local projects; especially important for the business and ICI sectors

Final Considerations

When asked for their advice in implementing the Plan or for any additional comments participants provided the following:

Economics versus environment: economics cannot be the sole reason for exploring renewable opportunities; there is a need to quantify the economic benefit of resiliency; exploring small-scale energy solutions/producers can increase the local economic participation and produce greater economic benefits

From payback to responsibility: not every program needs to incentivize individuals to participate, rather a paradigm shift is needed to make the community aware of their roles and opportunities

Pilots first approach: use pilot projects to both test for opportunities and demonstrate successes to the community

Simple: community adoption of renewable energy needs to include turn-key opportunities to increase uptake; create a streamlined process for people to get involved in easily

2.2 Survey

Administration conducted an online stakeholder survey from April 15th to May 6th, 2021. The survey comprised a total of 19 closed- and open-ended questions to identify their support for the proposed programs and to determine any associated opportunities or barriers. Respondents were able to write-in an "other" preference for numerous questions and provide explanations for their preferences.

2.2.1 Intended Audience

The survey was intended for all Low Emissions Community Plan Stakeholders as well as specific Subject Matter Experts.

2.2.2 Marketing Techniques

A variety of marketing techniques were employed to reach the intended audience.

1. City Website
 - a. Updates to the Engage Page were made to encourage participation in the online survey.
2. Email
 - a. Personalized emails were sent asking for their participation and to share the information with their members.

2.2.3 Analysis

The results were analyzed for the following indicators:

- Most popular programs and recommendations (count)
- Thematic analysis of reasoning offered for inclusion of certain program components over others
- Program components that might improve or reduce accessibility and uptake

Mixed methods were used to analyze the data. Qualitative methods included the thematic analysis and open coding of responses.

2.2.4 What We Heard

A total of 58 individuals participated in the survey with 85% operating in Saskatoon. The largest group of respondents were those involved in the energy sector (29%), followed by professional or technical consultants (17%), residential or commercial construction (16%), and environmental (12%).

Importance and Barriers

When asked on a scale of one to five how important it is that the energy they consume comes from low-carbon emitting and renewable energy alternatives, the average participant responded, “Somewhat Important”. Further analysis indicated a high degree of variance in the responses, meaning most participants either strongly supported or strongly opposed low-carbon emitting and renewable energy alternatives.

Out of the proposed barriers to community-wide renewable energy adoption, respondents identified the following in order of their importance:

- 
1. *Project costs* – renewable energy systems require significant capital investment (63%)
 2. *Return on investment* – savings or revenue generation may be low and result in a long payback period (61%)
 3. *Limitations to selling power* – there are limited opportunities to sell power at a larger scale (43%)
 4. *Access to capital* – limited availability for loans and capital funds to support renewable energy projects (34%)
 5. *Knowledge and Awareness* - the benefits are not well understood and there is little accessibility to resources and tools (23%)

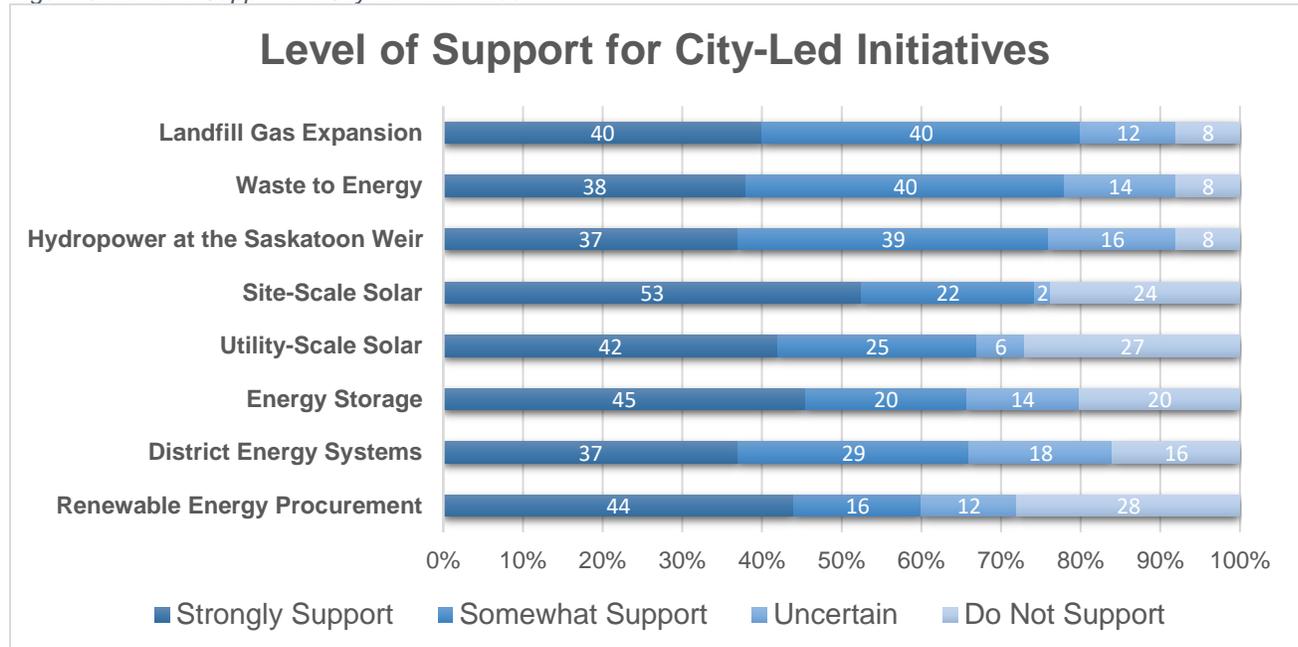
Other barriers suggested by participants included: a lack of understanding of how our energy generation and distribution systems work, failure of leadership to lead by example and be

innovative, uncertainty of the effectiveness of renewable energy, and the lack of data on the utility costs and return on investment.

Our Role in Renewable Energy – Leading By Example

Out of the proposed City-led programs being explored, respondents strongly supported or somewhat supported the proposed initiatives in the following ranking:

Figure 3: Level of Support for City-Led Initiatives



It should be noted that although the solar initiatives obtained some of the highest amount of support (Site-Scale Solar = 74% and Utility-Scale Solar = 67%), these categories also included the largest amount of variance due to the greater amounts of negative responses from participants (Site-Scale Solar = 24% and Utility-Scale Solar = 27%). The initiatives with the most amount of “uncertainty” were District Energy Systems (18%), Hydropower at the Saskatoon Weir (16%), Waste to Energy (14%), and Energy Storage (14%). This indicates the need for greater community education and awareness efforts prior to the implementation of these initiatives. Comments from respondents supported this need, suggesting that to properly weigh the benefits of certain programs over others, an overall better understanding is needed.

Suggestions for other City-led initiatives included the electrification of all City vehicles and equipment, eliminating unneeded lighting at night to also reduce light pollution, and exploring landfill gas opportunities. Risks that respondents provided for City-led initiatives included the following main themes:

Costs: the costs to the taxpayers should be a major factor; it was suggested that renewable energy generation can be incredibly expensive

Environmental impacts: there may be direct and secondary environmental impacts to using renewable energy, such as the processing of solar panels and batteries being carbon intensive, thereby offsetting any benefits that the intermittent power generation provides

Reliability: numerous respondents suggested renewable forms of energy generation are not reliable and consistent sources of energy; solar is viewed as not being a reliable form of energy generation

Our Role in Renewable Energy – Investor

When asked whether a city-wide rebate/grant program for solar PV installation that was facilitated by the City would be beneficial, most respondents stated it would be (57%). Respondents provided suggestions for other renewable energy incentive programs that they felt the City should be considering, including promoting renewable energy co-operatives, incentivizing property owners to install wind and solar on their buildings, and paying out supplemental generation.

Risks associated with incentive programs that were identified by respondents included the following main themes:

Administrative costs: the focus should be shifted to removing administrative costs and approval roadblocks

Costs are not the City's: many respondents felt that City taxes should not fund incentives; power production should not be a City responsibility but rather the responsibility of the utility provider

Equity: numerous respondents called for the City to ensure incentives/rebates are equitable and there are programs for all income categories; energy poverty is already an issue; rebates tend to help the wealthy and not those experiencing poverty and being marginalized

Our Role in Renewable Energy – Regulator

Respondents ranked the following proposed regulation and policy initiatives in order of their support:



1. Simplified solar administration process (78%)
2. Renewable energy development standards (74%)
3. Land-use planning (72%)
4. Solar easement policy (58%)

Suggestions for other regulations or policies included energy efficiency development standards, providing power purchasing agreement opportunities, and setting specific targets for renewable energy that consider the total energy being supplied. Respondents provided numerous risks and concerns that should be considered for the proposed policies and regulations being explored, including the following main themes:

Administrative costs: onerous regulations/programs can lead to a lack in uptake; must look to reduce “red tape” as much as possible saving administrative costs should be considered a priority

Simplicity: making policies and regulations too simplified creates the potential for participants to cut corners if they know there is limited oversight/permitting

Support from development community: there is the potential for the development community to strongly oppose any added regulations or policies, especially if initiatives do not have political support; yet some respondents felt that greater restrictions/requirements are needed

Our Role in Renewable Energy - Encourager

Out of the suggestions for the best ways to educate the community on renewable energy options, respondents identified their support for the following:



1. Savings calculator (53%)
2. Training opportunities (44%)
2. On your electricity bill (44%)
4. Website/app (38%)
5. Public-facing solar and energy mapping (36%)
6. Profiling success stories (33%)
6. Demonstrations (33%)

Educational gaps for renewable energy were identified, including how individual actions can lead to change, providing a trustworthy source of information that debunks misinformation, providing opportunities to see renewable energy use in action, and what steps are involved in implementing a renewable retrofit. Numerous suggestions were provided to limit educational gaps and improve community awareness, such as developing educational information for specific audience types, showcasing success stories within the community, and providing information that is easily understood.

Final Thoughts

Respondents provided their final comments, which were summarized into the following main themes:

Costs: some respondents felt that tax-payer dollars should not be spent on initiatives other than the basic necessities for living in a city

Efficiency over generation: numerous respondents suggested educating the community on how to make efficiencies in their home or business rather than renewable energy options

Energy poverty: energy poverty is an important issue; the City needs to focus funding for projects that are efficient while also providing those who are disadvantaged the means to participate

Support: many respondents expressed their support for the Plan and proposed initiatives

Utility provider: there is frustration amongst the community in regards to the restrictions that the current utility provider has implemented; current utility policies/programs have all but eliminated private investment in the renewable energy sector

2.3 Community Survey

An online survey was conducted from May 12th to June 2nd, 2021 and contained a total of 25 closed- and open-ended questions to identify the level of support for the proposed programs and to determine any associated opportunities and barriers. Respondents were able to write-in an “other” preference for numerous questions and provide explanations for their preferences.

2.3.1 Intended Audience

The survey was intended for the community and all identified participants.

2.3.2 Marketing Techniques

A variety of marketing techniques were employed to reach the intended audience.

1. City Website
 - a. Updates to the Engage Page were made to encourage participation in the online survey
 - b. An article promoting the survey to City staff was added to the City's internal website
2. Social Media
 - a. The social media campaign, which ran from May 12th – June 2nd, included Facebook and Twitter ads promoting the survey. An Instagram story with a clickable link was also used. All paid social media ads used location targeting
3. Digital
 - a. Online banner and display ads were also used, targeted to Saskatoon
4. Email
 - a. Personalized emails were sent to organizations and community members asking them to share the information with their members
5. Radio Ads
 - a. Radio ads ran from May 12th – June 2nd on local radio stations (Rawlco and Saskatoon Media Group) directing listeners to the Engage Page and public survey

2.3.3 Analysis

The results were analyzed for the following indicators using mixed methods:

- Most popular programs and recommendations (count)
- Thematic analysis of reasoning offered for inclusion of certain initiatives over others
- Opportunities that may improve accessibility and uptake

Mixed methods were used to analyze the data. Qualitative methods included the thematic analysis and open coding of responses.

2.3.4 What We Heard

A total of 508 individuals participated in the community survey with the largest group of respondents being residential homeowners (84%), followed by renters (15%), business owners (8%), and those involved in the renewable energy sector (5%). Many participants identified themselves as either being a concerned citizen or subject matter expert due to their interest in renewable energy.

Support for Renewable Energy

When asked how important transitioning our current energy supply towards more renewable energy options was, the majority of respondents felt it to be extremely important (70%) followed by somewhat important (15%). Out of the reasons provided for why renewable energy is important, respondents identified the following as being the most important:

- 
1. Reducing greenhouse gas (GHG) emissions (75%)
 1. Caring for the environment (75%)
 3. Climate change resiliency (68%)
 4. Long-term energy savings (56%)
 5. Job creation and economic growth (53%)
 6. Renewable energy is not important to me (6%)

Barriers to Renewable Energy Use

Out of the proposed barriers for renewable energy use, respondents provided the following ranking for what is currently preventing them from using renewable energy in their home or business:



1. Renewable energy projects are too costly (60%)
2. The energy savings potential is too low with too long of a payback period (40%)
3. There are limited opportunities to sell the power I generate back to the grid (34%)
4. My property is not suitable for renewable power generation (18%)
5. I do not own my home/property (17%)

Suggestions for barriers associated with using renewable energy included the following main themes:

Benefits for seniors: some respondents expressed that the long-term pay-off is more difficult to justify and envision for seniors who may not fully realize the benefits within their lifetime

Costs: the costs for installation and maintenance are too high; the return on investments and incentives are not properly marketed/advertised to the community; there are few grants or loans currently available to help cover capital costs

Lack of education and resources: the community has many questions regarding renewable energy that are not being answered in plain language; individuals considering renewable energy are not sure where to begin

Utility provider and provincial government: respondents expressed their mistrust and frustration towards the provincial utility provider for not recognizing the importance of renewable energy opportunities; many felt that there is little support from the utility provider and the provincial government

City Roles and Initiatives

The majority of respondents supported the City playing a role in the energy sector (84%), with only 12% stating that the City should not. When asked to prioritize the four potential roles the City could play in the energy sector, respondents suggested the City be an Implementor, followed by an Investor and Regulator. When respondents were asked whether the City should set its own renewable energy targets, 76% stated “Yes” followed by 16% stating “No”.

All the proposed City-led initiatives were supported by respondents ($\geq 54\%$). When asked to provide their level of support for the proposed initiatives, respondents provided the following ranking:



1. Waste to energy (89%)
2. Solar on City properties (88%)
3. Brownfields to brightfields (83%)
4. Electric vehicle (EV) adoption (76%)
5. Smart grid distributed energy research and demonstration (72%)
6. Hydropower at the Saskatoon Weir (68%)
7. Purchasing renewable energy (67%)
8. District energy systems (54%)

Waste to Energy was strongly supported in the comments provided by participants, with many stating the need for a paradigm shift in viewing waste as an energy source. Hydropower at the

Saskatoon Weir received mixed opinions, with some participants supporting the initiative in diversifying energy sources while others expressing their concern for the potential changing of local hydrology and geology within the river valley.

Solar energy was viewed by many respondents as a proven technology that has become more reasonably priced within the last five years; however, other respondents expressed their concern for the environmental impacts of solar panels, their inefficiency, the impacts to wildlife, and the potential costs to upgrade existing non-renewable systems as backups for solar energy. Although respondents supported the Brownfields to Brightfields initiative overall, some respondents expressed their concern for brightfields being built in areas that could be restored or used as greenspace or for infill development.

Comments associated with Electric Vehicle Adoption identified the need for more charging infrastructure across the city and identified the significant investment that would be required to adapt older multi-family buildings to the technology. Respondents expressed their concern regarding the potential for additional battery waste, the reliability of electric vehicles over long distances, and capabilities of our energy grid to handle the additional capacity.

The most popular suggestion for other City-led renewable energy initiatives was providing opportunities for the community to purchase renewable energy.

Incentive Options

Respondents were asked to state their level of support for the proposed incentive programs, which provided the following ranking:

- 
1. Financial support programs (81%)
 2. Energy loan program (78%)
 3. Development incentives (77%)
 4. Community renewable energy projects (74%)

Although most respondents supported the City providing development incentives, many felt these forms of incentives could easily be exploited by developers if the associated benefits/savings were not passed onto their clients and the community. It was suggested that instead of providing incentives, the City should implement regulatory requirements and bylaws that require developers to include renewable energy and charging stations into their developments.

Many participants strongly supported community renewable energy in their comments due to the ability for low-income residents or residents who do not own properties to still participate by investing in community energy generation opportunities (e.g., solar co-operatives). Many renters expressed they are wanting to participate in the programs but are unable to do so since they do not own their property; therefore, participants called on the City to create opportunities for them to participate in.

Other comments provided by respondents concerning incentive programs included the following main themes:

Disproportionate implementation: there is concern amongst respondents that incentives will disproportionately go to newer/larger construction projects while leaving already existing homes and parts of the city behind as energy costs increase

Incentives versus mandates: many respondents questioned whether incentives or mandates/requirements were more effective at generating change in the renewable energy sector

Changes to Policies and Procedures

Respondents were asked to state their level of support for the proposed changes to policies and procedures, which provided the following:



1. Solar administration process (86%)
2. Renewable energy development standards (78%)
3. Solar easement policy (70%)

Comments provided by respondents regarding the above initiatives included the following main themes:

Interfering with densification: a solar easement policy could potentially impact downtown infill targets which many respondents felt is extremely important for Saskatoon

Trees: limiting the planting and growing of trees due to increasing solar access is counter intuitive to other City programs (i.e., Green Infrastructure Strategy) and sustainability in general; however, it was recognized the trees can greatly limit solar access

Education and Awareness

When asked to state their level of support for the proposed education and awareness initiatives, participants provided the following ranking:



1. One-stop-shop website (83%)
1. Solar mapping tool (83%)
3. Home/building energy rating and disclosure (82%)
4. Sharing success stories (80%)
5. Training, workshops, or coaching sessions (75%)

Participants were also asked to identify what they believed were the best ways to educate the community about renewable energy programs from a proposed list of educational initiatives. Participants provided the following results:



1. Information on your electricity bill (76%)
2. Energy savings calculator (74%)
3. Energy audits and walkthroughs (59%)
4. School programming and resources (53%)
5. At public events and through informational booths (41%)

Final Considerations

When asked whether they were more likely to explore renewable energy opportunities in their home or business considering the information and program options that were identified in the survey, 47% stated their likeliness had not changed followed by 44% who stated they would be more likely.

Final comments provided by respondents included the following main themes:

Dependence on one stream: respondents expressed the need to diversify our forms of energy generation

Environmental considerations: many forms of renewable energy generation can influence our environment and local species (e.g., migratory birds, insects, etc.) so environmental impacts must be determined before installing any form of renewable energy; the City needs to consider the negative impacts of renewable energy generation, including rare earth metals mining, habitat alteration, effects on wildlife and migrating birds/insects

Low-income considerations: many respondents identified that the proposed programs currently do not provide opportunities for low-income residents to participate

Support: one of the most popular topics; many respondents commended the City for this work and for looking into the viability and feasibility of renewable energy in Saskatoon

2.4 Meetings

A series of meetings were held from June 2021 to September 2022 to determine multi-unit housing opportunities and receive feedback from Subject Matter Experts.

2.4.1 Audience

Low-income and affordable housing partnerships/opportunities were explored with the Saskatoon Tribal Council Cress Housing Corporation. Subject Matter Experts were engaged through the Energy Management Task Force.

2.4.2 Marketing Techniques

Representatives from the organization were contacted directly.

2.4.3 Analysis

Qualitative methods were employed, which included the thematic analysis and open coding of responses.

2.4.4 What We Heard

General Concerns and Barriers for Renters

Participants identified that many tenants want to improve their energy efficiency, but currently do not have the means to, are unaware of the opportunities, or do not see any direct incentives for renewable energy. It was suggested that this may be a vehicle for landlords/property managers to raise the rent in a more hidden way.

Numerous suggestions were provided to increase uptake within the renter community, including incentives for low-income renters, starting slow, and targeting non-profit landlords first, especially for pilot programs

Low-Income Housing Opportunities

Numerous partnership and funding opportunities for renewable energy in affordable housing projects were discussed throughout the various meetings. The City will continue to engage with the Saskatoon Tribal Council Cress Housing Corporation in the implementation of the initiatives represented within the Plan.

Support for Proposed Initiatives

Participants from the Energy Management Task Force congratulated the City for embarking on the Plan and placing renewable energy as a priority. The following main themes were discussed:

Education: partnerships with the Energy Management Task Force and SaskPower were suggested to educate the community on the opportunities and benefits of renewable energy in Saskatoon

Geothermal and wind: participants suggested exploring wind power and geothermal in the development of the recommended initiatives, due to associated improvements in technologies and potential benefits

Solar access: participants expressed their concern for improving solar access for residents to install solar PV on their properties; solar access is in direct conflict with the City's Tree Protection Bylaw and although Saskatoon's urban forest is important its interaction with solar access needs to be considered

2.5 Follow-up on What We Heard Survey

From June 27th to July 15th, 2022, an online survey was conducted, containing a total of 16 closed- and open-ended questions to identify the level of support for the recommended programs and to validate our findings. Respondents were able to write-in an "other" preference for numerous questions and provide explanations for their preferences.

2.5.1 Intended Audience

The survey was intended for the community and all identified participants.

2.5.2 Marketing Techniques

A variety of marketing techniques were employed to reach the intended audience.

1. City Website
 - a. Updates to the Engage Page were made to encourage participation in the online survey
 - b. An article promoting the survey to City staff was added to the City's internal website
2. Social Media
 - a. The social media campaign, which ran from June 27th – July 15th, included Facebook and Twitter ads promoting the survey. An Instagram story with a clickable link was also used. All paid social media ads used location targeting
3. Email
 - a. Personalized emails were sent to organizations and community members asking them to share the information with their members

2.5.3 Analysis

The results were analyzed for the following indicators using mixed methods:

- Most popular programs and recommendations (count)
- Thematic analysis of reasoning offered for inclusion of certain initiatives over others
- Opportunities that may improve accessibility and uptake

Mixed methods were used to analyze the data. Qualitative methods included the thematic analysis and open coding of responses.

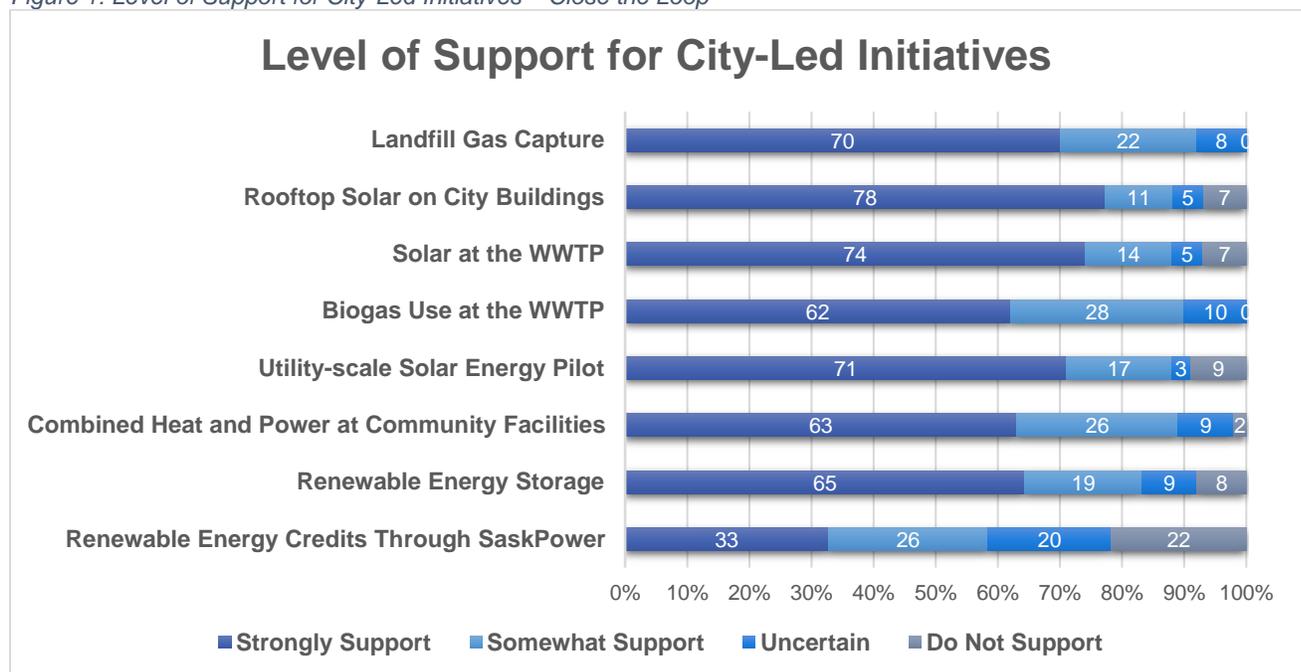
2.5.4 What We Heard

A total of 240 individuals participated in the community survey with the largest group of respondents being residential homeowners (83%), followed by renters (14%), and business owners (6%). Feedback was received from all of Saskatoon’s neighbourhoods.

City-led Initiatives

When asked to state their level of support for the recommended City-led initiatives, participants strongly supported all the initiatives except Purchasing Renewable Energy Credits Through SaskPower. Landfill Gas Capture received the most support, followed by Rooftop Solar on City Buildings and Solar at the Wastewater Treatment Plant. Purchasing Renewable Energy Credits Through SaskPower was not as supported by participants, with 20% of participants being unsure and 22% of participants not supporting the initiative.

Figure 1: Level of Support for City-Led Initiatives – Close the Loop



Within the comments, many participants strongly supported Landfill Gas Capture due to the initiative being one of the better ways to quickly reduce our GHG emissions by reusing gases that would otherwise dissipate into the atmosphere; however, some participants questioned whether the City should focus more on promoting waste diversion from the landfill. Some participants suggested that more information is needed on the associated emissions and environmental impacts before their level of support could be determined.

In general, solar energy received conflicting feedback within the comments, with some participants strongly promoting its use in transitioning towards renewable energy production and others viewing it as an expensive method with marginal emissions reductions. Respondents asked for the City to provide information on the production of solar panels to ensure the community is able to make an informed decision as to whether they should be used at a larger scale. Also, some participants called for new commercial buildings to also be included in the Rooftop Solar on City Buildings initiative. Other concerns included:

Environmental impacts: environmental impacts should be minimized, especially in areas that could be restored to provide habitat, spaces to grow food, or other environmental benefits; ensure measures are taken to minimize the impacts to birds (i.e., collisions, heat, etc.); participants expressed their concern for the unfair practises within the mining and manufacturing of solar panels

Solar access: participants were concerned that the City would introduce limitations to building heights around civic buildings; some felt that the City's tree protection efforts are in direct conflict with solar access

Waste disposal: many participants were concerned for the issues surrounding the proper disposal of solar panels

Both Combined Heat and Power at Civic or Community Facilities and Renewable Energy Storage were viewed as lacking in technology and unbeneficial when compared to other City-led initiatives. Some participants suggested these initiatives were steppingstones towards more impactful initiatives. If the City were to pursue energy storage, then one participant suggested considering mechanical energy storage versus traditional lead acid or lithium batteries.

The Purchasing of Renewable Energy Credits through SaskPower received the lowest support from participants, primarily due to the perceived additional costs and the community's mistrust for SaskPower. Participants expressed their concern for SaskPower's commitment to renewable energy and that the utility provider may not direct the income received from the program towards renewable energy within the province. Participants also expressed their concern for the program not being equitable for low-income residents.

"Although it is a worthwhile concept, further increasing the costs with an attached fee/tax to those not pursuing renewable energy options, especially if they are unable to afford them, is not equitable."

Suggestions for other City-led initiatives included:

- Combine the proposed initiatives with green/natural infrastructure projects, such as planting native plant species near solar installations
- Geothermal in civic buildings
- Net-metering
- Small modular nuclear reactors

Within the comments, many participants called on the City to implement all the initiatives in a timely manner to combat the impacts of climate change. Participants called on the City to lead by example by demonstrating the viability of clean energy, efficiency measures, and electrification to build confidence in the community. Other comments provided by participants on City-led initiatives included the following themes:

Costs: the City has to communicate the actual costs and return on investment to ensure the public has accurate information to make informed decisions; some participants felt that many of the initiatives will not cover the costs of the initial investment; ensure the costs of implementing do not outweigh the GHG savings; some participants encouraged the City to seek funding from federal and provincial grants/sources

Dependence on fossil fuels: some participants expressed their hesitation for supporting any initiative that still relies on natural gas or fossils fuels due to the potential environmental impacts and GHG emissions

“we can’t lose track of the critical long-term goals of solar energy or electrification of city public spaces, infrastructure and vehicles. The quicker we stop relying on natural gas the sooner we can surpass our goals.”

Focus on easy wins: participants suggested focussing on more cost-effective initiatives (e.g., solar farms) rather than initiatives that present further limitations (e.g., battery storage) to ensure the City is making sound financial decisions

More information needed: participants called on the City to justify the initiatives through peer reviewed, evidence-based sources to increase public trust in them; information on the impacts to municipal taxes and total life cycle analysis for each initiative is needed, such as the emissions to produce and properly dispose of the technology used

Role of utility: a few participants suggested that the City leave energy production to local utilities to perform at a larger scale to maximize benefits, rather than increase municipal taxes for the recommended initiatives

Wind being absent: some participants asked why wind power was not considered as an initiative worth exploring; participants suggested that new developments and improvements in wind technology make it a viable option worth considering

When asked which of the following funding measures participants support the City pursuing, participants supported the City borrowing through low-interest loans (57%) followed by increasing utility rates (48%) and increasing property taxes (41%). It should be noted that 23% of participants did not support any of the proposed funding measures

Incentives

Participants were asked whether they thought renewable energy generation was still worth the investment for their home or business considering the costs and long payback periods. Most participants stated it was worth investing in renewable energy (55%).

When asked whether additional rebates other than those currently available to home or business owners (i.e., Home Energy Loan Program [HELP], the Canada Greener Homes Program, the Home Renovation Tax Program, etc.) to invest in renewable energy generation, most participants stated “Yes” (52%), followed by those who were unsure (29%) and those who stated “No” (20%). Some participants felt that, although the HELP program is beneficial, it is currently too small and over-allocated with a long wait list for those who are interested in participating.

When asked to identify their level of support for the various proposed incentive initiatives, participants provided the following:

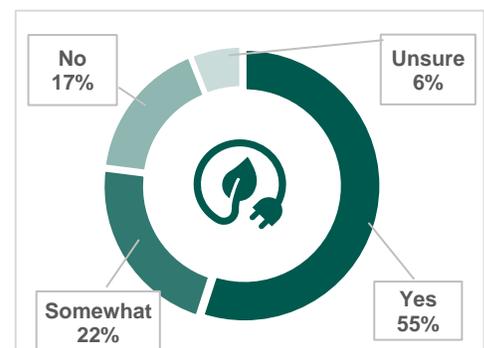
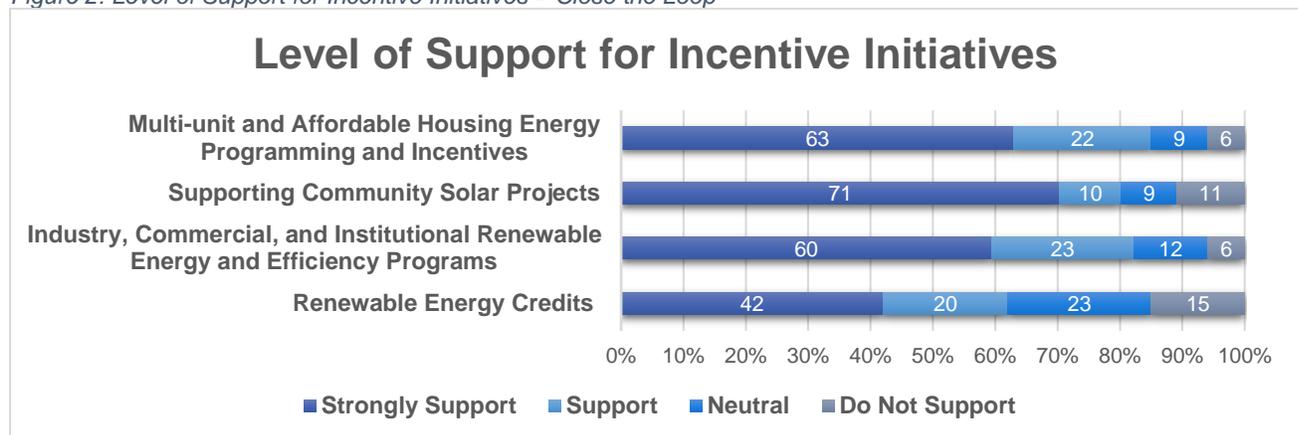


Figure 4: Whether Renewable Energy is Worth the Investment

Figure 2: Level of Support for Incentive Initiatives – Close the Loop



Although Multi-Unit and Affordable Housing Energy Programming and Incentives was supported, participants noted that these programs may not be as effective since the control and ability to participate remains with the landlord and not the renter, which could create more conflicts between these groups. It was suggested that the City needs to help bridge the gap between renters and landlords/condominium boards/property owners to help facilitate the transition towards renewable energy in multi-unit housing properties. Renters do not have the time nor resources to encourage their landlords to adopt renewable energy initiatives; therefore, programs should focus on convincing landlords these initiatives are worthwhile and incentives need to be passed to the renters instead of directly paying landlords for energy programming. One participant suggested that the program should include increasing efficiency requirements slowly over numerous years to facilitate better transitioning into renewable energy.

Supporting Community Solar received similar conflicting views shared in the comments for City-Led Initiatives. Participants felt that the program could potentially provide the largest return on investment, especially when partnering with non-profit organizations already performing this work. Participants believed that programs, such as this, that put the power in the hands of the public could more effectively promote renewable energy use within the community.

Some participants disagreed with providing incentives for the ICI sector, since they felt this sector should be held accountable and be responsible for their impacts to the environment. It was suggested that funding could be better allocated towards mandating and enforcing the ICI sector to be accountable in following city-wide emissions standards. Mandatory “green standards” for the ICI sector were suggested by many participants to ensure they are doing their part in reducing their emissions. Participants suggested that new housing projects should follow mandatory efficiency and renewable energy guidelines/standards (e.g., requiring solar on all new builds, better insulation requirements, etc.) so that they do not have to catch up on future efficiency goals.

Many participants were confused about the Renewable Energy Credits initiative, suggesting they are not an effective financial instrument nor successful in reducing emissions. Participants indicated that often renewable energy credits are not helpful in creating behavioural changes within the community because they do not hold residents/businesses accountable for their own actions nor promote individuals in taking action. One participant suggested renewable energy credits cause people to think as though they are donating to solve the problem (i.e., “buy our way out”), rather than taking steps to change their own actions.

“As for renewable energy credits, they are not helpful in creating change in citizen behaviour attitudes, rather they are more likely to have the opposite effect, of preventing change that could happen organically by allowing them to put it off for someone else to figure it out while continuing to be wasteful and excessive without thought.”

“I do not support Renewable Energy Credits because they allow others to continue to emitting CO2 while the rest of the community cuts emissions, resulting in fewer reductions by the community as a whole. Emission reductions that are sold are no longer saved because they support emissions elsewhere.”

One participant stressed the importance in using plain language and simple terms when calculating the number of credits one needs to offset their energy use to ensure participants fully understand what is needed. Participants asked for more information on how the credits will change behaviours and who will the credits be directed at.

Comments provided by participants on the incentive initiatives included the following themes:

Lacking equity: some participants suggest that the initiatives do not assist low-income residents in transitioning to renewable energy; many seniors are on fixed incomes and do not have the means to pay for these long-term payback upgrades; participants stressed that the incentive programs need to provide opportunities for low-income residents to participate

“Regardless of all these incentives and credits, etc. it is still going to be difficult if not impossible for low-income people to do the things they need and want to do to reduce energy use”

Net-metering rate: participants called on the City to keep the 1:1 net metering program to allow homeowners to better see the benefits and help drive the industry

Renters: some participants who identified as renters supported the City for exploring options that allow renters to participate, but more opportunities should be available

Simple: all initiatives should be easy to understand, sign-up for, and participate in; start with pilot projects for the initiatives to determine whether they are effective first

Suggestions for how the City can encourage future participation in the incentive initiatives included:

- Grants for meeting zero-energy requirements on new buildings
- Offer incentives to condominium boards and renting corporations for adding solar panels or creating more energy efficient buildings
- Work with SaskPower to enable better net-metering rates for the community

Transitioning

In previous engagement activities, we heard that it is important for the City to lead by example, but it is also important for the community to be part of the solution. Considering that the average at-home solar panel system has a generating capacity of 7kW, while the various City-led initiatives have a generating capacity of approximately 100-66,000kW, participants were asked what they would prefer the City to prioritize from numerous initiatives. Participants favoured prioritizing larger renewable energy initiatives (City-led) first (44%), followed closely by supporting both larger renewable energy initiatives and self-generation in the community (39%).

When asked what else the City can do to help the community transition towards renewable energy, participants provided the following suggestions:

- Approval and applying for retrofits should be simplified
- Change building codes to support net zero and reduced emissions through mandates
- Consider equity and programs for low-income residents
- Consultation services with “experts” on home renewable energy
- Decrease basic monthly fees for energy and increase consumption charges
- Develop more EV infrastructure, including charging stations
- Education and awareness campaign to encourage and provide accurate information
- Education for multi-unit and condominium owners to take steps they may be reluctant about
- Explore the use of small modular nuclear reactors
- Focus more on energy efficiency
- Improvements to public transportation, such as electrifying all busses
- Incentivize eco-friendly landscaping
- Increase the capacity and funding for HELP
- More incentive and grant opportunities for the community
- Provide an online resource hub for information on the programs and an online calculator to compare emissions and savings
- Provide information on the business case, costs, operation, and tax increases for the lifetime of all initiatives
- Streamline the process for all initiatives, including application, reporting, and using plain language
- Support active transportation through consistent signage and bike lanes
- Support businesses in providing EV chargers for their employees
- Support community organizations who are already doing this work
- Support net-metering through Saskatoon Light & Power and current rates (i.e., 1:1)
- Support passive house design and construction
- Support working from home
- Use renewable energy where it is generated to limit transmission costs

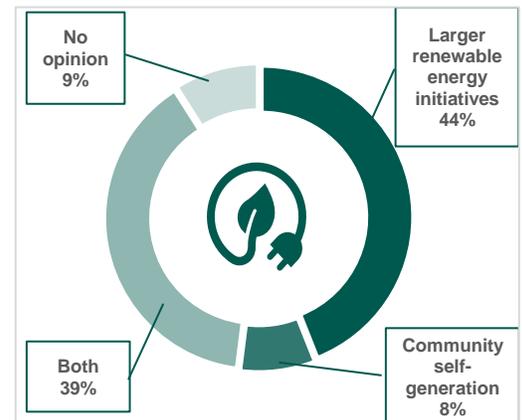


Figure 5: Prioritizing Community and City-Led Initiatives

Final Comments

When asked whether participants were more likely to explore renewable energy in their home or business based on what was presented in the survey, most stated they would (39%) followed by those stating “maybe” (30%) and “no” (23%).

Final comments provided by participants included the following themes:

Be ambitious: participants called on the City to be ambitious in its goals and their implementation

Costs: participants called on the City to be upfront about the costs of each initiative and in providing information on their total life cycle; some participants would prefer for the proposed initiatives to not be funded due to the potential increase in their property taxes; the initiatives may feel as though individuals are paying to lower someone’s energy bill while their costs remain the same

Education: participants suggested that although the initiatives will need education and awareness campaigns, this is not enough to convince those who do not want to participate to participate; the City must counter misinformation with information backed up by research that can be easily understood and applied at a residential level; continued public engagement is needed

Equity: participants stressed the need for the City to incorporate an equitable lens in the future implementation of all the initiatives within the Plan; low-income neighbourhoods should not be affected by the costs to fund these initiatives since most retrofits will be performed in other neighbourhoods

Holistic analysis: more information on the total life cycle for each initiative needs to be provided to determine the total GHG emissions for all options; some initiatives that may seem effective could be inefficient when accounting for the emissions used to develop, manufacture, and install them

Immediacy: many participants stressed that the impacts of climate change are being felt now and that Saskatoon needs to implement effective initiatives to combat rising emissions and their impacts on our environment; the City’s emissions targets need to be reviewed into order to catch up

“I urge the city to take much greater ambition on energy conservation and efficiency projects, building as much clean energy as possible, and electrifying its fleet and machinery as much as possible, as fast as possible.”

“Business as usual is not a sustainable option for anyone now. We all need to work to heal our planet and home, not just sit back and watch the show with popcorn.”

Local solutions: some participants stressed the importance of finding solutions that maximize the development of our emerging local economy and keep the benefits within our communities; this also stimulates the local job market and fosters innovation

Mistrust for renewable energy: some participants expressed their mistrust for renewable energy and its application in Saskatoon; issues include the low energy yield ratio of solar energy as well as solar PV waste/recycling; renewable energy methods cannot handle the average energy swings that a city presents to its baseload; other participants stressed the importance of renewable energy and called on the City to continue the path forward without stopping for the few who do not support the initiatives

Proper management: some individuals suggested renewable energy should not be exclusively relied on; introducing relatively unreliable renewable energy into the City's power grid could destabilize it and lead to both higher energy prices and brown-outs

Solar: is a topic with conflicting views throughout the survey; some participants believe that solar energy is not advanced enough to be applied at a residential scale, has issues regarding waste in its production and disposal, and is not an effective means of generating energy in the prairies; environmental impacts, such as bird collisions, need to be considered in all future applications; solar access continues to be a problem for many residents with trees

Support: many participants stated their support for the City exploring renewable energy within Saskatoon and for the proposed initiatives; participants called for a paradigm shift in how Saskatoon can use renewable energy to reduce our emissions, create a better economy, and improve our environment; some participants did not support the Plan going forward and called on the City to invest the funding into more important ventures

"Thank you for this opportunity to participate. I am very supportive of the leadership in this area. Well done, City of Saskatoon!"

"Thank you for your progressive leadership in examining this. It is a relief that the City is taking this direction..."

"Thank you for your work in this area. It is so important and the city of Saskatoon has been a leader in climate action in the province."

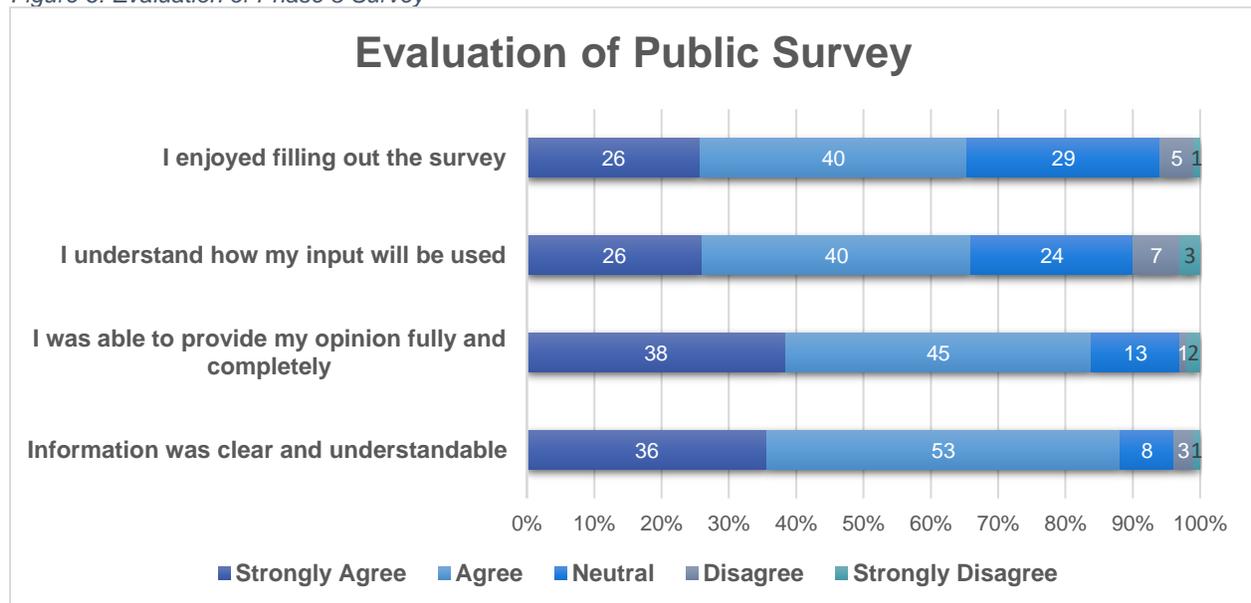
3 Evaluation of Engagement

Evaluation is discussed in terms of feedback received during engagement activities and through informal comments, data limitations and opportunities for improvement.

3.1 Survey Evaluations

Participant evaluation through the survey indicated support for both the level of engagement conducted and the opportunities provided. Throughout the three surveys participants generally agreed or strongly agreed with the information that was provided being clear and understandable (74% - 86%), with feeling they were able to provide their opinions fully throughout the process (68% - 87%) and understanding how their input would be used (60% - 68%).

Figure 6: Evaluation of Phase 3 Survey



Through the surveys participants expressed their support for the process:

"I think this survey was very well done. It shows the City of Saskatoon is willing to engage with the public."

"We are very excited about topics discussed and programs being developed!"

"I cannot express how happy I am even to be able to fill out this survey."

"The educational element of this survey is impressive: integrating Indigenous uses per our place on Treaty 6 territory can only benefit a healthy society."

Some respondents provided some suggestions to improve future surveys, including being clearer on the costs of the initiatives and describing both the positives and negatives of the initiatives.

"None of the options above provide any insight into the cost of the options. Yes it sounds great to do some of these things but most are prohibitively expensive. Please rephrase the question to something like: "would you support renewable energy projects that will increase your energy costs by 25%, 50%, 75%, 100%?" Otherwise, these initiatives have no context to be evaluated."

“Again, only the positive aspects of these initiatives are provided, and not possible down side of each. I don't like to make uninformed decisions yet I know the city should be doing more than it is currently.”

“Your reference document doesn't include the costs of each initiative - it shows the potential GHG offset but at what expense? I think without providing people that information you need to interpret these with caution. I support these initiatives but if you asked me if I want my property tax to go up 10% to fund these then I would need to think differently and potentially reconsider.”

Some participants suggested using more plain language when describing the initiatives and keeping survey lengths to a minimum:

“This survey is far too long and extremely detailed. Perhaps it should be broken down into smaller steps?”

“It was difficult to find and I have seen NO advertising about it, so I really hope folks who care find it and take the time to wade through it. it is extremely dense with many tangents (info links) where one could get lost.”

“Thank you sending this survey. I find that many parts/questions of the survey are meant more for those people who have more expertise than the more average citizen.”

Some respondents noted the importance of reengaging the community during the implementation of the recommended initiatives represented in the Plan.

“Additionally, each project MUST involve consultation with appropriate stakeholders which include residents of neighborhoods (in some cases), and Indigenous leaders and communities in other cases, as necessary. I would encourage the city to be cooperative in these projects, and be transparent on the environmental an economic analysis done for each of the proposed renewable projects.”

“When having meetings to speak with the city and community, announce in on the radio and on the news. Some people don't have access to social media or other platforms. Also send emails or put inserts in bills from the city.”

3.2 Informal Feedback

Informal feedback was received through meetings where participants indicated that they appreciated the continued engagement throughout the COVID-19 pandemic. Many participants supported the City's effort in developing Plan, stressing the importance of the proposed initiatives for the future of Saskatoon's sustainability efforts.

3.3 Data Limitations

Due to the public health orders related to the COVID-19 pandemic, all engagement activities were restricted to virtual methods. The goal of this phase was to identify a range of perspectives, needs and concerns across sectors to help inform refinement of the proposed initiatives. By restricting the engagement methods to virtual forms only, it potentially limits the validity of the results in terms of providing a full representation of the population under consideration

The COVID-19 pandemic also shifted the priorities for many people, resulting in numerous participants being unable to participate in our engagement process due to more pressing concerns. Therefore, some participants may not have been able to fully participate in the engagement activities conducted; however, the results are considered to provide the best available indication of how the community and participants perceive the Plan at the time.

Virtual engagement has limitations, primarily by limiting accessibility for those without internet access or with limited computer literacy and by enabling greater accessibility to those who are more active online. Multiple avenues were available for the public to provide their input and mitigate the inability to conduct in-person activities; however, engagement practises and procedures were limited due to the COVID-19 pandemic, especially in conducting physical meetings with the community. Additional considerations for low-income, Indigenous and residents who are structurally excluded will need to be incorporated into future engagement opportunities.

Renewable energy is a complex and evolving field that the community has a diversity of opinions on. Many respondents expressed their uncertainty for the proposed initiatives (i.e., district energy systems, waste to energy, hydropower at the Saskatoon Weir, etc.) because of the lack of information available as to what the initiatives are and how they will improve renewable energy generation for the City. By providing more information on the initiatives (i.e., costs, benefits to GHG reduction, etc.), the community will be better able to properly weigh the opportunities and barriers for these initiatives.

Although our goal was to prioritize the initiatives within the Plan, it was clear that many participants had difficulty doing so. Many of the initiatives received similar support, making it difficult to prioritize the initiatives based on the feedback received. One reason for this was the confusing and often technical subject material, which caused participants who lacked experience or technical knowledge on renewable energy the inability to effectively compare the initiatives and potential GHG savings.

“Thank you for doing this work. I appreciate being consulted but don’t know enough about all the issues to prioritize. I would defer to the experts.”

“I love completing these surveys, however I worry about how someone with a lower educational background or someone who speaks English as a second language would fair with the survey. The language used in the survey is written at an academic level and not all residents would be able to participate in the survey.”

Because of this, an accurate comparison of the initiatives could not be conducted without a better understanding of their potential benefits in reaching the City’s emission targets, the potential impacts to the community, the difficulty in implementing them, and their correlation with other City initiatives. Although the data collected from the Community Surveys informed the development of the Plan, the project team relied on best practises research from other municipalities, internal considerations, and feedback from subject matter experts to prioritize the initiatives within the Plan. Future communications and engagement will need to improve on how these elements can be better communicated to the community.

3.4 Opportunities for Improvement

Based on participant feedback, the following opportunities for improvement will be considered for future engagement activities:

- Any written or verbal information uses plain language and easy-to-understand terms
- Considerations for engaging with low-income, Indigenous, renters and equity groups needs to be incorporated into future engagement opportunities
- Educating the community on the importance, actual costs, and impacts of renewable energy should be a priority for future awareness campaigns

- Steps should be taken to explore virtual options for workshops, which are an important tool for engaging communities

4 Next Steps

The next steps for development of Renewable and Low Emissions Energy Implementation Plan are described below:

Phase 0: Involvement of Low Emission Community Plan Stakeholders

- Determine the level of interest of past Low Emission Community Plan Stakeholders

Phase 1: Options Identification

- Identify renewable energy initiatives that may work in Saskatoon
- Identify opportunities and barriers associated with the Plan and proposed programs

Phase 2: Selecting Preferred Initiatives

- Identify community preferences to help inform the selection of recommended programs
- Prioritize recommended programs
- Further identify new program elements that enhance opportunities and mitigate barriers

Phase 3: Follow-up on What We Heard

- Share components of the Plan and recommended programs to identify any concerns
- Validate key findings with the community

Report to City Council

- The Plan will be presented to City Council in 2022