

DURHAM

COMMUNITY
ENERGY
PLAN

**Stakeholder Feedback
on the Draft Plan**

Thursday, November 22, 2018

Whitby Centennial Building

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Executive Summary

Two identical stakeholder sessions were held on Thursday, November 22, 2018 in Whitby to gather feedback on the draft Durham Community Energy Plan (DCEP). A total of 36 community stakeholders participated. Feedback was gathered by way of a number of questions, as follows:

1. How do we best engage the general public, private sector, politicians and the non-profit sector about the need to transition to a low carbon future?
2. What are the key success factors (critical elements) that we need to have in place in order to ensure successful implementation of the program?
3. What blocks/obstacles do we need to remove/mitigate to ensure successful implementation?
4. What role will stakeholders play in program design and implementation?
5. Who else needs to be involved in the design or implementation of these programs? Are any stakeholders missing?
6. Where do you think we can achieve the greatest success and why?
7. What patterns did you see emerging in today's discussion?
8. What part of Durham energy's future excites you?
9. What part of Durham energy's future worries you?
10. What advice would we give to each other as we transition our energy system?

Key Messages Based on Stakeholder Feedback

As a result of the stakeholder feedback session, the following key messages about how to achieve a low-carbon future have been developed:

- The stakeholders overwhelmingly support the Low Carbon Pathway and feel a strong sense of urgency to transition to a low-carbon future.
- The transition to a low-carbon future is seen as an economic, social and environmental opportunity that includes significant job creation, energy efficiency, reduced energy consumption and increased self-reliance.
- Transitioning to a low-carbon future will be a long-term undertaking that will require persistence in the face of changing political priorities.

- The challenge of transitioning to a low-carbon future is multi-faceted and will require the commitment and effort of all stakeholders with shared roles and responsibilities.
- Communicating the costs and benefits, and the return on investment of implementing the Low Carbon Pathway will be very important.
- Simple and consistent communication will be vital in order to challenge myths and misinformation, and speak to what is important to the community and the interests of each sector.
- Education of the community and all sectors will be necessary to support a successful transition to a low-carbon future and address any outstanding questions.
- Stakeholders need to educate themselves beyond their own self-interests and keep the “big picture”, including common benefits, in mind.
- Involvement of post-secondary institutions will help open the door to innovation and bring the next generation on board to ensure future progress.
- Government needs to lead by example.
- Leveraging existing progress and demonstration projects from Durham and elsewhere will be key to making progress.
- Small, incremental steps made by many will make a big difference.
- A community champion(s) will be essential to a consistent and sustained commitment to the Plan and its successful implementation.

Next Steps

The DCEP is available for public review and input until mid-December 2018. The Plan and implementation programs will be revised in early 2019 based on all input received from stakeholders and the public. The goal is to seek Regional Council approval in principle by March 2019, and seek local municipal and utility endorsement in 2019. Implementation of the Plan would also start in 2019.

Welcome and Introductions

On Thursday, November 22, 2018, a total of 36 community stakeholders (Appendix A) met at the Whitby Centennial Building to participate in Durham Community Energy Plan (DCEP or the Plan) stakeholder feedback sessions. Participants introduced themselves and what stakeholder group they were representing. Two identical sessions were held – one in the morning and one in the afternoon. Helen Break, with The Monarch Park Group Inc., facilitated the sessions.

Purpose

The sessions were held to gather feedback on the draft DCEP. There was full participation of the stakeholders present. The results are captured in this report.

Agenda

- Welcome and Introductions
- Background and Context
- Stakeholder Feedback
- Wrap-up
- Next Steps

Individual Survey

Stakeholders were asked to individually complete a three-question survey. The results can be found in Appendix B. Fifty-five percent of respondents indicated they were moderately aware of the impact of alternative energy pathways on our local economy and the climate, while 33% said they were extremely aware. All respondents but one supported the Low Carbon Pathway. All respondents indicated that it is urgent to transition to a low-carbon future, with 75% saying it was extremely urgent, 17% saying moderately urgent and a combined 1% indicating it is somewhat urgent or slightly urgent.

“The Durham Community Energy Plan is a roadmap to achieve deep emissions reductions and energy savings for every fuel type while driving local economic development and job creation.”

Background and Context

Following welcome and introductions, Brian Kelly, Manager of Sustainability at the Region of Durham presented a synopsis of the purpose, scope, process and results of the DCEP to date. Key messages included:

- The DCEP seeks to accelerate the transition to a clean energy economy in Durham, while simultaneously achieving multiple economic, environmental and social benefits. The Plan considers all forms and features of energy (supply, demand, storage and transmittal) with a time frame of 2015 to 2050.
- The Plan was developed over three stages: Stakeholder Engagement, Baseline Data Study and Plan Development.
- The Plan responds to the stakeholder-generated vision that spoke to: innovative, smart and diversified energy solutions, reduced carbon footprint, economic prosperity, environmental health, and reliable, resilient, integrated, sustainable and financially viable energy sources affordable for all.
- Energy means more than electricity, which represents only 17% of Durham's current energy supply.
- The DCEP sets out three scenarios: Business as Usual (BAU); Business as Planned (BAP); and Low Carbon Pathway (LCP).

Under the LCP, Durham's total energy use declines 51%, greenhouse gas (GHG) emissions decline 70% and air pollution emissions from energy use decline about 70% by 2050 compared to the BAU scenario. This is despite a doubling of population.

- Under the LCP, average annual household energy costs (home and vehicle) decline from \$5,800 in 2016 to \$2,650 and reduces annual energy expenditures across the region by \$1.4 billion (35%) by 2050 compared to the BAU scenario.
- The amount of renewable energy supplying Durham increases from 10% in 2016 to 56% in 2050 under the LCP.



- Durham Region will be about 56% energy self-sufficient by 2050 under the LCP and less subject to energy supply disruptions and economic shocks to the national or global energy system, compared to today's 19% self-sufficiency.
- Under the LCP, by 2050, electricity will make up 51% of total energy consumption, due mostly to electric vehicles and the use of electricity in space heating (through efficient heat pumps).
- The investment required for the LCP is \$31 billion over the period, and total savings and revenue generation is \$40 billion.
- The expenditures required for the LCP are initially higher but become the less expensive scenario by about 2034. By 2050, the LCP is \$2.75 billion per year less expensive than BAU and the cumulative savings over the period are \$5 billion and growing.
- The LCP is about job creation with investments in energy efficiency and energy generation activities creating about 210,000 person-years of employment over the period or an average of 7,000 jobs per year.
- The DCEP proposes six programs:
 1. Durham Green Standard: Enhanced energy performance for new buildings
 2. Durham Deep Retrofit Program: Transforming existing buildings
 3. Renewable Energy Co-operative: Stimulating local renewable energy projects
 4. Electric Vehicle Joint Venture Program: Happy motoring
 5. Education and Outreach Program: Engaging the community
 6. Coordinating Land-use Policies: Sustainable growth



ELECTRIC BUS



HOME ENERGY RETROFIT

The questions asked by the stakeholders about the DCEP are captured in Appendix C.

Stakeholder Feedback

The stakeholders worked in four small groups, self-selecting which sector or program they wanted to work on, and answered a series of questions intended to gain insight into a communication strategy. The questions and answers generated are presented below.

How do we best engage the general public, private sector, politicians and the non-profit sector about the need to transition to a low carbon future? Stakeholders were asked to consider what the message(s) and delivery method(s) should be.

Who	Message	Delivery Method
General Public	<ul style="list-style-type: none"> • Constant and consistent messaging • About transit and changing habits • “What’s in it for me?” • Communicate benefits, cost/benefit, options e.g. level of investment • How easy it can be (off-the-shelf) • Provide support e.g. how to maintain systems • Educational for kids • Make emotional connection • Make it clear to everyone what their role is in the solution • Create link from plan to project • Appeal to the public based on what they value as citizens (quality of life, cost of living, etc.) • Ask them what they want the future to look like i.e. their home, their commute • Focus on finding champions (groups) in the community • Include harder to reach groups that may not see direct impact – renters who will have more comfort in a retrofitted unit • Emphasize two-way communication – we have a plan and need public’s help to implement, to make it work – “you can play a role” 	<ul style="list-style-type: none"> • Tax/utility bill inserts • Municipal and local distribution company newsletters • Libraries • Hands-on • House tours • Signage (visual) • School programs • Major community events (piggyback) • Family Day weekend events • On-line consultation • Find them in their cocoon – Facebook, YouTube, online, social media

Who	Message	Delivery Method
Private Sector	<ul style="list-style-type: none"> • Labour skills/vendors/suppliers to keep up with a large scale implementation • Show the money, demonstrate the return/profitability/predictability • Demonstrate that the implementation won't impact the timing of approvals (i.e. expedited approvals) • Educate industry on the range of benefits to market • Create a compelling business case/return on investment – where does the money come from for the capital investment? • Region/local municipalities to demonstrate using their own facilities/participation • Affordability/competitiveness • Capacity to do the work – building up skill level • Define the business opportunities/creating new markets • Tailored message to specific sector • Communicate opportunity for green branding • Communicate incentives • Educate on return on investment, business case, retrofit information and technologies • Lead by example as municipality e.g. greening of fleet • Core support/partnership with municipality – smoother engagement with government. Cut red tape to cut costs. Streamlining/fast tracking • Economies of scale • Culture of conservation within business sector 	<ul style="list-style-type: none"> • Demonstration sites • Advertising on electric vehicles (daily) • Branding • Incentives

Who	Message	Delivery Method
Politicians	<ul style="list-style-type: none"> • Teach how the dots connect between oil, gas, renewable energy, energy storage • Find an alignment with current political priorities • Find a simple business case for a simple project to get started • Work with engineering and finance to get “buy-in” of the plan • Show cross-sectoral support • Work with Boards of Trade to add pressure politically and encourage collaboration • Work with the “innovative big guys” to talk to our community about their energy priorities • Promote the economic development opportunities • Promote awards, photo opportunities • International recognition (ISO, Compact of Mayors, etc.) • Social benefits (more affordable housing, reduce congestion, etc.) • Appeal to impact of actions on number of votes • Keep it simple – educate/communicate about myths (e.g. solar) • Start with young people – millennials are key stakeholders • Speak to politicians mandate for change • Let them know that technologies have, and continue to, change • Let people/society know that the status quo is not free • Consider policies that grab attention of accountants (e.g. investment models) • Waste from energy inefficient behavior (e.g. disposal of light bulbs) • Tone down “GHG” terminology in favour of economic • “Jobs of the Future” • Educate re. environment. GHG reduction activities are good for business (decrease costs) • Zero marginal cost structure preferred over variable cost structure (former preferred) 	

Who	Message	Delivery Method
Non-Profit	<ul style="list-style-type: none"> • Early and iterative • Engage through education and sales (selling the concept) of cost/benefit analysis • Offering incentives and rebates to drive implementation • Private sector charitable contributions – tax write-offs, marketing benefit • List not-for-profits by subject/customer need and then effectively define the benefit of the proposed programs to their target audiences • Seek advice from non-profits, ask about their roles and improve program designs • Housing/affordability, environmental, health <p>Note: currently no environmental not-for-profits in Durham</p>	<ul style="list-style-type: none"> • Business to business – Surveys and interviews

For the next round of feedback, the stakeholders were split into six groups. Each group answered three questions for one of the six programs in the DCEP intended to gain insight into the critical elements, the blocks/obstacles and the role of stakeholders for each of the programs. The questions follow with responses shown in the following tables.

1. What are the key success factors (critical elements) that we need to have in place in order to ensure successful implementation of the program?

Stakeholders were asked to be as specific as possible.

2. What blocks/obstacles do we need to remove/mitigate to ensure successful implementation? Stakeholders were asked to think about what we need to do to support/achieve our key success factors.

3. What role will stakeholders play in program design and implementation? Stakeholders were asked to think “outside the box” and consider what their role is now and where there may be future opportunity for them to play a new or expanded role.



Program 1: Durham Green Standard - Enhanced energy performance for new buildings

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Adoption by the Ontario Building Code • All-around education i.e. builders, trades, consumers, etc. • Affordability for the consumer • Incorporated into city planning • Support from home builders industry • Incentives e.g. financial and other • Decreased development charges • Flexibility in standard – not prescriptive • Clean-up of regulations, by-laws, codes 	<ul style="list-style-type: none"> • Financial “stress test” to the consumers • Price of natural gas • Confusion in codes; disagreement in authority • Shortage of trades and lack of trades knowledge • Lack of education • Lack of vision for innovative design/different design
Stakeholder Roles	
<p>Region – visionaries, force, direction, provider of incentives (they have tools), consultation with municipalities and developers</p> <p>Lower Tier Municipalities – apply standard, verification of built form to standard, enforcement, consultation with developers</p> <p>Utilities – educating public, provide incentives, provide policies or feedback to policies, controlling energy in and out</p> <p>Private Sector – marketing, educating, investing</p> <p>Non-profit – researching standards, implementing standards e.g. Conservation Authorities</p> <p>Province – dictates down to municipalities</p>	

Program 2: Deep Retrofit – Transforming existing buildings

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Awareness (mechanisms for saturating awareness) • Knowledge and education program and skilled execution teams • Education of regulators, marketplace, finance • Addressing risk – financial, performance, life disruption with mitigation plans • Complete de-risk for residential home owner - Property Accessed Clean Energy (PACE) Program • Financing/affordability • Innovative, transparent administrative process with tracking • Clearly defined allowable projects to meet the goals of the program • Home renovation market (\$1 billion/year in Durham) equals opportunity for deep retrofit • Revenue-neutral property tax tool • Develop and train the necessary workforce • Innovative business models, outcome-based procurement 	<ul style="list-style-type: none"> • Upfront cost • High cost • Disruption of the living space (timing) • Work force - number and skills • Product supply bottlenecks • Corruption (pricing benchmarking prior to program being announced) • Misalignment of procurement priorities vs. impact (align incentives to achievement – lifecycle costing) • Bureaucracy and transition costs • Lack of knowledge/education • Lack of skilled trades • Asset renewal department is independent of energy management – “siloed” • Conflicting incentives (business model cost-plus or design-bid-build); outcome-based design-build aligns interests
Stakeholder Roles	
<p>Region – currently owns the plan and process. Ensure establishment of implementation group with appropriate governance and terms of reference</p> <p>Region/Lower Tier Municipalities – regulatory incentives e.g. streamlining approvals, education (of and by), marketplace facilitators, lead by example, property tax incentives, integrate asset renewal and energy management, initiate private sector relationships</p>	

Stakeholder Roles (cont'd)

Lower Tier Municipalities – support Plan development, align with policy, publish or help spread knowledge of reputable/"proven" deep retrofit contractors, financing - preferential treatment to low carbon businesses, permitting, insert energy advising into permitting process

Utilities – current administration of retrofit programs, behind the meter solutions, renewable natural gas – "greening the pipes"

Private Sector – integrate asset and energy management, innovative financial strategy

Non-profit – awareness campaigns

Province – government policy, more funding

Program 3: Renewable Energy Co-operative – Stimulating local renewable energy projects

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Open, voluntary enrolment of “membership” (shareholders) from public and private sector e.g. solar share-type co-op • Coordinated effort • Clear role, mandate and authority • Provincial policy support (or remove “red tape”) • Need business model that provides a quantifiable return on investment • Opportunities for local employment • Critical mass of investors is needed to get the ball rolling e.g. as a non-profit/social enterprise/utility • Education, training and info from co-operative and its members • Concern for the community – vested interest • Integrated new technologies • Financial models 	<ul style="list-style-type: none"> • Regulatory barriers • Legislative barriers to municipalities participating in a co-operative that might make money • Complicated message that does not educate public/potential investors • Unaffordable • No understanding or support by municipal/regional/local distribution company financial staff and/or politicians • Lack of clarity about what a co-op is • Technological capacity, e.g. of transmission system to accept power from renewables, is not there (storage, distribution system) • Awareness/education – need “buy-in” to programs and to change attitudes
Stakeholder Roles	
<p>Region - be the coordinator of effort to explore co-op design and initial start-up investment cost, possible financial supplier, possible tax incentives</p> <p>Region/Lower Tier Municipalities - identify and connect potential shareholders and investors, identify early adopters who are interested in helping get the co-op going</p> <p>Lower Tier Municipalities - offer tax incentives, local education centres, community outreach, local support and green energy zones</p> <p>Utilities - provide incentives, program support and development, and consumer education</p>	

Stakeholder Roles (cont'd)

Private Sector - provide manpower, green employment, marketing and education thru channels, funding, legal support (lawyers)

Non-profit - provide education, some money available, expand green energy programs, e.g. Business Improvement Area and Energy Co-op to assist new and existing business

Province/Federal - provide funding for programs, demonstration sites e.g. buildings that have been upgraded

Shareholders (eventually) e.g. public, private sector, local distribution companies

Program 4: Electric Vehicle Joint Venture – Happy motoring

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Communication between stakeholders • Key partnerships (municipalities, local distribution companies, car companies, etc.) • Incentives (provincial/federal) • Knowledge/understanding of electric vehicle (EV) industry and necessary infrastructure improvements • Charging station – linking • Economics – to communicate to the public • Convenience – where and stations • Investors – approach electrical companies, pension funds, municipalities (transit, buses, school buses), private investors 	<ul style="list-style-type: none"> • Lack of funding/support from all levels of government • Vulnerability to changing government • Navigating politics/changing political priorities • Reliance on government funding vs. private investments • Lifestyle preference (pick-up trucks vs. Tesla) • Initial costs of EV's (personal and commercial) • Perception – perceived risk and costs • Return on investment • Education – what is it like in the day of all EV's? Give people opportunities to try them out. Use language that people understand • Ontario Security Commission obstacles re. laws and regulations • Competitive interests e.g. oil related
Stakeholder Roles	
<p>Region - lead a study on EV infrastructure, electrify transit and fleet</p> <p>Lower Tier Municipalities – electrify fleet, charging infrastructure on city land</p> <p>Utilities – electrify fleet, invest in financing, changes to existing regulations</p> <p>Private Sector – partnerships with utilities/government, investment financing, EV chargers as option for new builds, partnership incentives</p> <p>Non-profit – n/a</p> <p>Province – legislate/lobby for EV's, create demand/offer incentives for EV's, replace Green Ontario Fund with another funding model</p>	

Program 5: Education and Outreach – Engaging the community

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Need to educate everyone – consumers, trades, sales staff, builders, land developers • Testimonials • Buy-in from government – leading by example • Government needs to push uptake • Small little improvements are big if everyone does it! • Focus education on the younger group that has the most to gain • Consistent messaging • Targeted message to audience, “keep the end user in mind” – framing the message • Simplicity – easy to understand, visuals to quickly gauge where we are at • Be clear about roles/how to get involved • Personal – profiles of neighbours taking part and showcasing individual’s energy saving, “sharing the success” • Phased in communication - program initiatives, updates throughout 	<ul style="list-style-type: none"> • Government short-term focus – when government changes everything changes, mandate, etc. • Financial viability in question • Lack of education or priority • Misinformation, rumour mill, heard something that counters science • Lack of universal plug/adaptor for EV charger in garage that fits all of manufacturers • People tune out/oppose low carbon pathway due to polarization of “green issues” • Lack of money available for upfront investment that is required • Culture of conservation not yet part of local culture in Durham • Information overload – people hear a lot of info from media etc., education materials might be ignored • People may not have motivation to get involved even with the education
Stakeholder Roles	
<p>Region - do marketing, show me the “money”, buy here, invest in Durham, communication plan and funding, work with sectors e.g. building industry to create demo sites, working with universities and colleges to create education programming and implementation</p>	

Stakeholder Roles (cont'd)

Lower Tier Municipalities - use by-laws, buy here, show me the “money”, great place to live, education, touch-point with individual residents, communicate what is in it for them, designing programs to bridge gap between investment and returns, need to communicate, truly listen to both sides and provide updates on Plan achievements, gathering local success stories of the Plan in action, tailoring/framing messaging to their own municipality and local Council, financial contribution to education programs

Utilities - be leaders, give me/show me the “money”, look-good marketing, education, communicate clearly the electricity needs in the region and work with the community on how best to meet those needs bringing the community energy plan into discussion to ensure consistency, community outreach, advertising specific info, on-bill info re. renewable vs. non-renewable energy production

Private Sector - do positive branding/marketing, show me the “money” and provide money, develop demonstration sites, partnerships with governments, colleges/universities to develop education tools, advertising to their client base, promoting their own greening of operations

Non-profit - give me the “money”, show me the “money”, facilitate meetings for program updates, speak to conservation values, GHG impact

Province - be policy changers, implementation power, show me/give me the “money”, political flexibility, ombudsman (energy efficiency vs. generation/consumption dilemma), insights (who is looking inside? Ontario Energy Board?), need for two-way dialogue to ensure provincial policy aligned with regional policy, info on how Region and upper level government initiatives are supporting each other, funding for colleges/university programs

Program 6: Coordinating Land Use Policies – Sustainable growth

Key Success Factors	Blocks/Obstacles
<ul style="list-style-type: none"> • Bill 168 – climate change policies in Official Plans • Region’s Municipal Comprehensive Review – alignment, embed core principles of DCEP • Local Official Plans – enabling policy • Secondary plans – sustainable design • Tier 1 and Tier 2 Official Plans need to be congruent • Balanced consideration of all factors • Skilled staff to meet the requirements of review and implementation • Certainty behind the policy 	<ul style="list-style-type: none"> • Competing policy objectives • Public – private, upper – lower tier silos • Direction of Provincial Growth Plan • Ability to mandate (must/require) vs. guidelines (may) • Pressure for development – timing, appeals, competition • Municipal political will • Innovations occurring faster than policy updates • Resources to implement – municipal and development industry (skills/experience)
Stakeholder Roles	
<p>Region – high level, informed by stakeholders, consistent guidance with lower tier, Conservation Authorities</p> <p>Region/Lower Tier Municipalities – policies that allow for creativity and innovative ideas for sustainable community design</p> <p>Lower Tier Municipalities – provide framework, design of plan</p> <p>Utilities – education and outreach, funding, be supportive and adaptive, enable infrastructure, agile in their policy, flexible business models, advocate/promote support changes</p> <p>Private Sector – implementation, maintenance and most funding, buy-in, technical capabilities/tech know-how, marketing to sell the ideas</p> <p>Non-profit – research, education, demonstration sites, Chambers, Boards of Trade, Girls and Boys Club – support leading policy adopters, support technology, continue to advocate for innovative approaches, evaluate market trends outside jurisdiction, advocate/pressure upper levels of government, promote other benefits – economic, social “good for business” and communicate to the public</p>	

Stakeholder Roles (cont'd)

Province – money, incentivize demand for energy efficiency, provide over-arching policy, provide enabling policies to support sustainable growth, within every piece of legislation affecting economy and growing communities, enable infrastructure

Transportation – needs to happen at a provincial and regional level, not just municipal, increased connectivity, policy cohesion

The stakeholders were asked to comment on two further questions. The questions and answers follow:

Who else needs to be involved in the design or implementation of these programs? Are any stakeholders missing?

- Post-secondary institutions
- Regulators e.g. building inspectors, engineers, planners, architects
- Conservation Authorities
- Ontario/local builder associations
- Financial sector
- Federal government
- Local citizens/neighbourhood associations
- Business owners
- Faith-based organizations
- Transportation, trucking and logistics

Where do you think we can achieve the greatest success and why? Areas to consider include: new buildings, existing buildings, renewable energy generation, low or zero carbon energy generation, transit, active transportation, private/personal use vehicles, industrial.

Stakeholders noted that it is difficult to choose one area given success will be dependent on whether funding supports are provided, cost/benefit analysis and local perspective. The responses follow:

- Transit (2 responses)
- New buildings (2 responses)
- Existing buildings
- Waste
- Water (pumping, treatment, use)
- Agriculture (livestock)
- Industrial
- Private/personal use
- Active transportation
- Renewable energy generation and storage
- Infrastructure

Wrap-Up

Each session concluded with a reflection on what patterns the stakeholders saw emerging from the discussions, what parts of Durham’s energy future excites you or worries you, and what advice we would give each other as we transition our energy system to the LCP. The feedback received is captured in the following tables.

What patterns did you see emerging in today’s discussion?	
<ul style="list-style-type: none"> • Political uncertainty • We don’t know what we don’t know • Translation of plan to implementation is fuzzy - need clarity around process • Question has changed from “is this possible?” to “how do we do it?” 	<ul style="list-style-type: none"> • Need to leverage existing progress • Consumer adoption is critical • On financial path – show me, why, cost/benefit analysis, financial viability • Communication and education – complicated, myths exist • Multiple approaches and stakeholders

What part of Durham energy’s future excites you?	
<ul style="list-style-type: none"> • LCP is possible if we work together • Doing something good for our children’s children • Have a planned, systematic approach with rational • DCEP is an aggressive plan • Built form will change our look 	<ul style="list-style-type: none"> • That the conversation is happening • We have an opportunity to have cleaner environment, create jobs and save money • DCEP provides a positive vision for the future • People willing to see challenges as opportunities

What part of Durham energy's future worries you?	
<ul style="list-style-type: none"> • Change won't happen fast enough • Political changes can result in stop-and-go/getting part way there then election takes place • single voice • Inertia • Cost is not the only reason we are doing this, but we keep coming back to cost • Turnover of car and nuclear industries • Do we have enough resources (government, trades, etc) • There is risk associated with leading 	<ul style="list-style-type: none"> • Giving priority to energy when there are conflicting or other priorities Possibility of human extinction – let's hope we are not too late • Missed opportunity if we don't transition to the LCP • People won't see value in the LCP • Not able to catalyze initial investment • Political platforms vs. science • Can we do it well? • Potential future debt loading if projections are wrong

What advice would we give to each other as we transition our energy system?	
<ul style="list-style-type: none"> • Be persistent • Don't put all eggs in one basket • Don't say it can't be done • Take ownership • Consider the big picture • Celebrate wins and learn from losses • Lead by example 	<ul style="list-style-type: none"> • Just do it • Educate ourselves beyond our own self-interests • Use common sense approaches • Keep individual in mind – clients, customers and immediate and longer term timelines • Keep the conversation going

Next Steps

Brian Kelly, Manager of Sustainability, Durham Region outlined the next steps in the process. He explained that the DCEP is available for public review and input until mid-December 2018. The Plan and implementation programs will be revised in early 2019 based on all input received from stakeholders and the public. The goal is to seek Regional Council approval in principle by March 2019, and seek local municipal and utility endorsement in 2019. Implementation of the Plan would also start in 2019.

Appendix A: List of Participants

Name	Organization
Abid Syed	City of Pickering
Amy Burke	Municipality of Clarington
Angela Portecus	Central Lake Ontario Conservation Authority (CLOCA)
Beverly Nollert	Independent Electricity System Operator (IESO)
Christine Drimmie	Region of Durham
Dan Rubv	Ontario Centres of Excellence (OCE)
Dan White	Whitby Chamber of Commerce
David Lupu	Graybar Canada
David Risborough	Durham Agricultural Advisory Committee
David Wotten	University of Ontario Institute of Technology (UOIT)
Don Armitage	Enbridge
Doran Hoge	Region of Durham
Dorothy Stewart	Enbridge
Grant McGregor	City of Pickering
Hossan Gaba	University of Ontario Institute of Technology (UOIT)
Ines Ribein Canella	Mosaic Environmental Consulting
Jade Schoefield	Town of Ajax
Janet Taylor	Oshawa Power

Name	Organization
Jodi Janwin	Town of Whitby
Joel Baetz	Trent University Durham
Jonathan Schickedanz	Durham Region Home Builders Association/Far Sight Homes
J. P. Fernbach	EV Fern Ltd
Laraib Arshad	City of Oshawa
Laura Malyjasiak	Region of Durham
Maggie Ma	Dousay Development Corporation
Marc Guillemette	Brookfield
Maria McDonnell	Town of Whitby
Meaghan Harrington	City of Oshawa
Paul DeBerardis	Rescon
Robbie Goulden	Solera Sustainable Energies Company Limited
Scott Bullock	Enbridge
Sergey Popov	K3D Building Automation
Steve Zabrowski	Veridian Connections Inc.
Tim Short	Enbridge
Victoria White	City of Oshawa
Wesley Bristol	Ecosystem Energy Services

Appendix B: Individual Survey

Following are the results of the individual survey.

N = 36

Rate of return = 18 or 50%

Q1: Rate your level of awareness of the impact of alternative energy pathways on our local economy and the climate. Respondents were asked to consider if they are able to explain the issues to someone.

Not at all aware	Slightly aware	Somewhat aware	Moderately aware	Extremely aware
0	0	2	10	6

Q2: What Durham future energy scenario do you support?

Business as Usual (BAU)	Business as Planned (BAP)	Low Carbon Pathway (LCP)
1	0	17

Q 3: How urgent is it in your mind to transition to a low-carbon future?

Not at all Urgent	Slightly Urgent	Somewhat Urgent	Moderately Urgent	Extremely Urgent
0	1	1	3	13

Appendix C: Questions Asked by Stakeholders about the DCEP

Assumptions

- What are the assumptions behind the scenarios e.g. cost, consumption?
- How were the assumptions determined?
- To what extent was “greening the pipes” considered?
- Has the death of the internal combustion engine been factored into the DCEP?
- To what extent was legislation factored in?

Financial

- What are the model returns?
- Who is investing?
- Who is investing in building retrofits?
- What is required to bring private investment to the Region?
- What is the capital investment required over time?
- How do you incent developers to put in capital for renewable energy?
- How will residential retrofits be funded?
- Were the financial models in the DCEP checked?
- What happens to the low carbon pathway scenario if funding is not there?

Government

- Have the Region/local municipalities the resources to implement the Plan?
- What level of land use planning was considered (e.g. Region Official Plans and/or lower tier Official Plans) regarding the capture of the natural heritage system?
- What other municipalities have completed a community energy plan?
- What can we do at the community level (individual, business, organizational) without government policy?
- How will coordination of land use policies fit with provincial intensification and density targets? Are there any conflicts?
- How will government policy influence implementation of the low carbon pathway scenario?

Impacts

- What job sectors lose jobs given the DCEP low carbon pathway scenario?
- How will current players/actors be impacted?

Miscellaneous

- Will the DCEP replace the Local Action Plan?
- Are there examples to support the low carbon pathway scenario and projections?
- Why do we specify electric vehicles rather than clean energy vehicles in the DCEP?
- Is consumer education going to be enough?
- How does the DCEP fit into (stakeholder) strategic plans and priorities?

Technology

- How are we handling energy storage?
- To what extent did the work consider convergence of complimentary technology?
- What are the main technology barriers e.g. battery storage?

Utilities

- How do utilities raise enough revenue to support capital costs?
- Will utilities implement retrofit programs?

Appendix D: Durham Community Energy Partners

