



## **GREEN ENERGY AND CLIMATE CHANGE WORKING GROUP AGENDA**

Friday, June 9<sup>th</sup>, 2023 – 2:00 p.m.  
Municipal Office – Council Chambers – 217 Harper Road

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***Chair, Councillor Greg Hallam***

- 1. CALL TO ORDER**
- 2. AMENDMENTS/APPROVAL OF AGENDA**
- 3. DISCLOSURE OF PECUNIARY INTEREST AND/OR CONFLICT OF INTEREST AND GENERAL NATURE THEREOF**
- 4. APPROVAL OF MINUTES**

- i) **Minutes – April 14<sup>th</sup>, 2023 – *attached, page 4.***

*Suggested Recommendation:*

***“THAT, the minutes of the Green Energy and Climate Change Working Group Meeting held on April 14<sup>th</sup>, 2023 be approved as circulated.”***

- 5. DELEGATIONS & PRESENTATIONS**

None.

- 6. BUSINESS**

- i) **Climate Action Plan Update**

- Waste Management Plan Update – traffic counts and land purchase
- Composting Options for the Township – Waste Sites Blitz and Giveaways
- Building Conditions Assessment Recommendations – *attached, page 12.*
- Electric Vehicle Life Cycle Analysis [Green-Fleets-Business-Case-Series.pdf \(cleanairpartnership.org\)](https://cleanairpartnership.org) – *attached, pages 14.*

- Advocate for Stronger Greenhouse Gas Reduction Targets and Actions at the Federal, Provincial and County Levels of Government (from Climate Action Plan)
- Develop Ongoing Communications Strategy that Informs and Motivates Community Climate Actions by Residents, Businesses, and Community Organizations (from Climate Action Plan)
  - Website - <https://www.tayvalleytwp.ca/en/discover-tay-valley/green-energy---climate-change.aspx#What-is-Green-Energy>
  - Did You Know? series

ii) **Communications**

- Lanark County Climate Change Committee Update – Noelle Reeve
- Should Tay Valley Declare a Climate Emergency – Peter Nelson – [Get Your Clock — Climate Clock](#) – Draft resolution - *attached, pages 17.*
- National Building Code update on Energy Efficiency – *attached, page 19.*
- Invitation to Sundance Artisan Festival

**7. NEW/OTHER BUSINESS**

None.

**8. NEXT MEETING DATE AND PROPOSED AGENDA ITEMS**

Next Meeting: August 11, 2023

**9. DEFERRED ITEMS**

*\*The following items will be discussed at the next and/or future meeting:*

- *None at this time*

**10. ADJOURNMENT**

# MINUTES

# GREEN ENERGY AND CLIMATE CHANGE WORKING GROUP MINUTES

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Friday, April 14, 2023

2:30 p.m.

Council Chambers

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## ATTENDANCE:

**Members Present:** Councillor, Angela Pierman  
Bob Argue  
Jennifer Dickson  
Douglas Barr  
David Poch  
Peter Nelson

**Members Absent:** Councillor, Greg Hallam  
Gilbert Rossignol

**Staff Present:** Noelle Reeve, Planner  
Allison Playfair, Building & Planning Administrative  
Assistant, Recording Secretary

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## 1. CALL TO ORDER

The meeting was called to order at 2:30 p.m.  
A quorum was present.

## 2. AMENDMENTS/APPROVAL OF AGENDA

i) Addition Under New/Other Business: Invitation to Sundance Artisan Festival.

The agenda was approved as amended.

## 3. DISCLOSURE OF PECUNIARY INTEREST AND/OR CONFLICT OF INTEREST AND GENERAL NATURE THEREOF

None at this time.

## 4. APPROVAL OF MINUTES

i) **Minutes – March 17<sup>th</sup>, 2023.**

The minutes of the Green Energy and Climate Change Working Group Meeting held on March 17<sup>th</sup>, 2023, were approved as presented.

## 5. DELEGATIONS & PRESENTATIONS

None.

## 6. BUSINESS

### 1. Climate Action Plan Update.

#### Waste Composition Study Results

B. Argue provided an analysis of the data that was included in the Waste Composition Study – *attached page 9*. Overall, the Township is doing well compared to other municipalities but there is room for improvement. The first chart shows how well the recyclable materials Tay Valley currently accepts are recycled. Almost all paper, glass and metal are recycled. Plastics is the least recycled category followed by paper packaging. In other words, these latter two categories wind up in the garbage stream rather than the recycling stream the most.

The last two columns of this chart show new potential for recycling (by diverting the recyclables Tay Valley currently accepts out of the garbage) and by including additional recyclables (e.g., milk cartons).

The Planner was not sure of how the new Circular Economy regime will affect the Township's recycling program. The Planner will ask the Public Works Manager.

The second chart shows that Tay Valley has comparable proportions of recyclables to other municipalities with the exception of large urban centres that compost a significant portion of their waste. This chart also shows that Tay Valley has a lower proportion of non-acceptable waste than other municipalities (again with the exception of large urban areas).

Unfortunately, because the Waste Composition Study was undertaken for free by the province, the consultants did not break out what the non-acceptable garbage consisted of but B. Argue can make some educated inferences based on his decades of work in this sector (where unacceptable waste can be broken down into over 40 categories) and he can discuss with the Public Works Manager.

The third chart shows again that Tay Valley is doing well at recycling compared to other municipalities, with the exception of composting organic material. It is important to get the organic material out of the waste site because as vegetables, grass, etc, decompose they emit methane which is a climate change accelerator.

A discussion was held and it was agreed that encouraging more backyard composting, awareness of the Re-Use Centre, and trying to increase the

types of material able to be recycled would be the Working Group's recommended priorities for the Township to pursue.

The Planner will discuss with the Public Works Manager about the Blue Box Transition and if the Township can do additional recycling or composting at the waste site.

The Working Group suggested that the Township could send out information on how to make your own composting bin as the Township is not sure when more composting bins will be available to sell. This could be a good news release for Earth Day.

The Planner informed the Working Group that the Township has a Waste Management Master Plan that was received by Council in the fall before the new Council was elected. The Public Works Manager intends to focus on its implementation later this Spring.

### Building Conditions Assessment Report

The Planner asked if the Working Group members had a chance to review the Building Conditions Assessment Report and could suggest any items that would be beneficial for improving the Township's energy efficiency and green house gas reduction. She noted that these items would go to the Treasurer to potentially be included in the budget for next year and to help provide the Public Works Manager with a heads up for tenders of future projects.

B. Argue prepared a list but the Working Group did not receive the email in time for the meeting. The list will be circulated as part of the next agenda.

B. Argue also pointed out that it is important to take a whole lifecycle view of an asset. For example, the thermology rating in the Building Conditions Report only indicates if there is a cold spot in a wall. It does not indicate if the wall should have more insulation applied to the outside of it to reduce heating costs for the building.

It was discussed that it should not be up to the Working Group to identify what needs to be considered in a tender. There needs to be an ongoing education process for the use of lifecycle costing and the climate lens before tenders are drafted.

For example, the flat roof replacement tender for the Municipal Office building resulted in a roof with less insulation than would be required if it was being built new today. With the roof removed, now would be the time to upgrade the insulation from R-12 to R-25 but that is not going to happen because the request was not made in the bid document.

The Planner mentioned that the Public Works Manager had asked a company to write the specs on the replacement roof because he did not know what the Township should be asking for in a roof tender but the company did not include any climate action improvements.

The Working Group recognized the Public Works Manager will not be an expert in all aspects of facilities as his training is more oriented toward roads. Therefore, the Working Group suggested adding money to the Township budget to allow the Public Works Manager to send out Requests for Proposals to green energy experts like the Green Building Alliance, etc. to get feedback on upcoming RFPs for assets.

The Planner also mentioned that once the Asset Management Plan is completed and presented to Council this Spring, it will describe what equipment, facilities, roads, etc. need to be replaced and the year of repair or replacement which would provide enough notice for staff to complete the writing of RFPs viewed through the climate lens in advance.

The Working Group recommended that Township Request for Proposals (RFPs) should ask companies that are submitting bids to include life cycle costing, energy efficiency and GHG reduction options in all work to repair or replace assets, that the Treasurer's analysis should indicate the true operating costs of the alternatives, not just the capital costs and that utilizing a social discount rate to recognize the benefit of Greenhouse Gas reduction and energy efficiency be discussed by Council. The social discount subsidy should come from a reserve and the savings over the lifetime of the asset should be returned to that reserve.

## ii) **Communications**

### Lanark County Climate Change Committee Update.

The Planner updated the Working Group that the Lanark County Climate Change Working Group agreed to change the GHG emission target for 2030 from a 20% reduction to a recommended 45% reduction. It was noted that this increase would be in line with the Federation of Canadian Municipalities (FCM's) new targets and the Intergovernmental Panel on Climate Change's (IPCC's) target to keep global warming to 1.5C. This recommendation will be discussed by County Council on Wednesday April 26.

The County Environment and Climate Change staff have recommended that \$10,000.00 be given to each municipality to use towards Climate Action for: purchasing an electric vehicle; purchasing public charging stations; or purchasing composting equipment. The Township could use this subsidy for the Ford Lightning electric pick up truck.

The Working Group discussed the use of the County money to purchase the Ford Lightning pick up truck rather than a Food Cyclor.

B. Argue did not support Food Cycler because it does not produce compost. It dehydrates organic material to a concentrated powder that must be placed in a deep trench and left for a year before planting seeds or plants in it. Otherwise, it will kill seeds or plants because it is too highly concentrated. In addition, it is expensive to purchase and to operate (\$100 filters need to be changed twice a year) and it costs \$500 (\$300 if subsidized) so who gets them? Finally, it is energy intensive to use.

The Working Group recommended supporting the use of the County money to purchase the Ford Lightning pick up truck.

Whereas the International Panel of Climate Change has called for global warming to be held at 1.5C to avoid worsening the impacts on people and the environment from climate disruption (see Risks from Rising Temperatures – [attached page 10](#)); and whereas Canada will experience more rapid warming due to our northern location; and whereas Tay Valley Township has experienced damage from more frequent and severe weather events including flooding, the derecho, an ice storm and drought in the past five years, which were the hottest ever in recorded world temperatures; and whereas Tay Valley Township has committed to reducing its contribution to global warming to no more than 1.5C by reducing its Greenhouse Gas emissions through its Climate Action Plan, accepted by the Federation of Canadian Municipalities Partners for Climate Protection program; and whereas the Township is required to replace a light pick up truck as part of its fleet management; therefore, the Green Energy and Climate Change Working Group urges that all of the \$10,000 provided by the County of Lanark for municipal climate action projects (for either public charging stations, fleet EV purchases, or public composters) be allocated to the purchase of the Ford 150 – Lightning.

#### Should Tay Valley Declare a Climate Emergency?

P. Neilson emphasized the urgency of taking steps to reduce climate disruption, provided information and reasons why the Township should declare a climate emergency – [attached page 11](#)

He noted that the County of Lanark should also be urged to declare a climate emergency because their recent decision to not use air source heat pumps was bad economics and locked in fossil fuel use when one of their principles for Climate Action was to eliminate fossil fuel use.

The Working Group decided it will gather more information that would be beneficial to help educate Council about what it means for the Township to declare a climate emergency.



The Planner clarified that raising awareness of a climate emergency does not require the Community Emergency Management Coordinator to call the Emergency Response team together.

#### National Building Code Update Energy Efficiency - Doug Barr

D. Barr explained that he believes that Tay Valley should find a way to require all new builds to have mandatory solar panels on roof tops and Electric Vehicle charging stations roughed in.

The Working Group discussed different ideas that could help homeowners move toward more energy efficient new builds in Tay Valley. Two suggestions were: a tax reduction incentive if possible (similar to the tax reduction provided to landowners who manage forests) or a by-law for green building standards. The Planner and Working Group members will bring examples of Townships that have adopted Green Building Standards to the next meeting.

#### Suggestions for Education Residents and Council

The Planner will explore if FCM does in person presentations that could be useful to Council on the urgency of tackling climate disruption.

### **7. NEW AND OTHER BUSINESS**

#### **i) Invitation to Sundance Artisan Festival.**

The Planner advised the Working Group that the Chief Administrative Officer received an invitation for the Working Group to have a booth to provide information to the community at the Sundance Artisan Festival on Labour Day Weekend (located behind the Fall River Cafe in Maberly and along the Fall River). A discussion was held with different ideas that could be put on display and it was felt that one day would be possible but not all three days. The Working Group will discuss further at the next meeting.

### **8. NEXT MEETING DATE AND PROPOSED AGENDA ITEMS**

Next Meeting: May 12, 2023

The Working Group suggested that they meet monthly for the next 6 months to help the new Council to be informed.

## 10. DEFERRED ITEMS

*\*The following items will be discussed at the next and/or future meeting:*

- **Climate Action Plan Update**
  - a. *Waste Management Master Plan Update*
  - b. *Electric Truck Purchase Update*
  - c. *Should Tay Valley Declare a Climate Emergency?*
  - d. *National Building Code Update Energy Efficiency*
  - e. *Invitation to Sundance Artisan Festival*

## 11. ADJOURNMENT

The Working Group adjourned at 4:18 p.m.

# **BUSINESS**

## **Building Conditions Assessment Recommendations – Bob Argue**

### **TVT Building Condition Assessment Report from a Climate Lens Perspective**

#### **Background**

TVT has initiated a policy of applying a Climate Lens into all reports to Council. The Climate Lens identifies the potential climate impact of any decision, policy, purchase, or program, and, if possible, to quantify any GHG impacts, either positive or negative. This provides an ongoing assessment of how well the Township is meeting its climate goals as set out in the Climate Action Plan. It also provides another level of information that can influence decisions.

*To be effective, a Climate Lens should be used at all levels of decision-making.* In other words, it should not just be applied after the fact to identify the GHG impact in a final report. It should also be applied while preparing tenders, purchase orders, or policies, and used to help identify the most beneficial climate and financial options.

#### **Building Condition Assessment**

An example of using a Climate Lens in a proactive way would be to identify opportunities where GHG savings might occur in any future work that comes out of the Building Condition Assessment report. This report examines 14 township building assets and identifies capital expenditures that are likely required over the next few years.

For example, the report recommends replacement of the flat roof section of the Municipal Office on Harper Road. This involves removing the 3” of extruded polystyrene insulation that’s there (R12.6). This is an opportunity to upgrade the insulation to Code or better (R25 to R60). Unfortunately, a tender was issued for a replacement of only R14.5 (2.5” of polyisocyanurate). This was a lost opportunity to bring the roof at least up to Code and save heating and cooling costs for the next 20+ years, along with the additional GHG savings.

Whenever a building is considered for maintenance, renovation, or design, the opportunities for energy efficiency and GHG reduction should be considered up front. Some of the recommendations in the Building Condition Assessment report that might lend themselves to a proactive application of a Climate Lens include the following:

##### **Municipal Office – 217 Harper Road**

- Replacement of flat roof (opportunity to increase insulation, but tender already released)
- New electric heaters: possible heat pump application? (more efficient heat, also provides cooling.)
- Longer term projects including HVAC system and electrical improvements: possible time to look at ground source heat pump/solar PV net metering combination to replace the existing natural gas furnace.

##### **Bathurst Garage – 217 Harper Road**

- 5-year capital improvements: possible installation of Level 2 or Level 3 EV charging

##### **Burgess Garage – 4174 Narrows Lock Road**

- 5-year capital improvements: possible installation of Level 2 or Level 3 EV charging

Maberly Garage – 172 Maberly Elphin Road

5-year capital improvements (including electrical upgrades):

- possible installation of Level 2 or Level 3 EV charging

Burgess Hall – 4174 Narrows Lock Road

5-year capital improvements including:

- electrical upgrades: possible installation of Level 2 or Level 3 EV charging
- foundation repair: upgrading foundation insulation
- replacement of exterior windows and doors: more energy-efficient windows and doors
- replacement of baseboard heaters: heat pump for more efficient heating (and provide cooling).

Maberly Hall – 180 Maberly Elphin Road

- Install electric heaters: opportunity for efficient heat pumps

## **Electric Vehicle Life Cycle Analysis**

### *General argument for using life-cycle costing:*

There are several compelling reasons why the municipality of Tay Valley Township should use life cycle costing to make appropriate decisions on climate change rather than just considering up front costs.

Firstly, life cycle costing takes into account the total cost of ownership over the entire life of a product or service, including both the initial cost and the ongoing costs of maintenance, operation, and disposal. This means that decisions based on life cycle costing will result in a more accurate reflection of the true costs of a project or initiative, including its long-term environmental impact. By contrast, decisions based solely on up front costs may lead to short-sighted decisions that ultimately end up costing the municipality more in the long run.

Secondly, climate change is a complex and multifaceted issue that requires a holistic approach. Life cycle costing enables the municipality to consider a wide range of factors, including the environmental impact of a project or initiative, as well as its economic and social impacts. This approach can help ensure that the municipality is taking a comprehensive approach to climate change, rather than simply focusing on one aspect of the issue.

Thirdly, by using life cycle costing to make appropriate decisions on climate change, the municipality of Tay Valley Township can demonstrate its commitment to sustainability and responsible stewardship of public resources. This can help build trust with residents and businesses in the community, and position the municipality as a leader in addressing climate change.

In conclusion, by using life cycle costing to make appropriate decisions on climate change, the municipality of Tay Valley Township can make more informed, comprehensive, and sustainable decisions that reflect the true costs of its actions. This approach can help ensure that the municipality is well-positioned to address the complex and multifaceted issue of climate change in a responsible and effective manner.

## Total Cost of Ownership/Lifecycle Costing for Electric Vehicles vs Internal Combustion

TABLE 8: SUMMARY AND COMPARISON OF TOTAL COST OF OWNERSHIP

	2019 FORD FUSION S	2019 CHEVROLET BOLT EV
SELLING PRICE	\$28,090	\$44,800
TOTAL FUEL COST	\$7,553	\$1,008
TOTAL MAINTENANCE COST	\$6,517	\$3,423
RESALE / SALVAGE VALUE (AFTER 7 YEARS)	\$5,155	\$8,221
TOTAL COST OF OWNERSHIP	\$37,005	\$41,010
INCENTIVES	0	\$5,000
CARBON TAX (7 YEARS)	\$700	0
TOTAL COST	\$37,705	\$36,010
DIFFERENCE		- \$1,695

**TABLE 11: SUMMARY AND COMPARISON OF TOTAL GHG EMISSIONS**

	2019 FORD FUSION S	2019 CHEVROLET BOLT EV
<b>ANNUAL CO<sub>2</sub> EMISSIONS</b>	1,909kg CO <sub>2</sub>	48.67kg CO <sub>2</sub>
<b>TOTAL CO<sub>2</sub> EMISSION (7 YEARS)</b>	13,363kg CO <sub>2</sub>	340.7kg CO <sub>2</sub>
<b>DIFFERENCE</b>	<b>- 13,022kg CO<sub>2</sub></b>	

Our analysis shows that the total cost of ownership based on driving patterns, travelling 10,000km/year and fleet management practices of resale / salvage vehicles after 7 years, a Chevrolet Bolt EV will be \$1,695 less than a similar internal combustion engine vehicle such as Ford Fusion. Replacing with a Chevrolet Bolt will also save 13,022kg CO<sub>2</sub> emissions from the municipal fleet per vehicle replaced.



## The Climate Clock Conveys the Urgency to Act



### 1. A [HUGE CLOCK](#) UP IN YOUR CITY.

Follow the lead of Berlin, New York, Seoul, Rome & Glasgow, and install a monumental Climate Clock in the center of your city.

Create an iconic reference point, and shift public awareness.

### 2. AN [ACTION CLOCK](#) IN YOUR HANDS.

Perfect for schools, universities and offices, this clock is portable and built for action.

### 3. A [DIGITAL CLOCK](#) ON YOUR WEBSITE.

iii) REMIND EVERY VISITOR THAT WE MUST #ACTINTIME.

To add the Climate Clock widget to your site, all you have to do is add the following HTML:

```
<script src="https://climateclock.world/widget-v2.js" async></script>
```

```
<climate-clock />
```

## **Should Tay Valley Declare a Climate Emergency**

### **A DRAFT RESOLUTION DECLARING A CLIMATE EMERGENCY IN TAY VALLEY TOWNSHIP**

WHEREAS, Tay Valley Township recognizes that climate change is a global crisis that affects us all, and urgent action is needed to mitigate its effects;

WHEREAS, Tay Valley Township acknowledges that it has a responsibility as a local leader to take action to address the climate crisis;

WHEREAS, Tay Valley Township has already passed a Climate Action Plan and established an advisory group to guide its efforts in reducing greenhouse gas emissions, promoting renewable energy, energy efficiency, and sustainable transportation, and building a more sustainable, prosperous, and resilient community;

WHEREAS, Tay Valley Township recognizes that declaring a climate emergency can mobilize the community around this urgent issue and inspire residents, businesses, and community organizations to take action to reduce their carbon footprint and promote sustainable living;

WHEREAS, Tay Valley Township recognizes that taking action on climate change is not just an environmental issue, but also an economic and social issue that can create new green jobs, promote economic growth, and improve the health and well-being of residents;

WHEREAS, Tay Valley Township recognizes that it can work with other municipalities, organizations, and stakeholders to promote climate action and build a more sustainable, prosperous, and resilient region;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF TAY VALLEY TOWNSHIP that:

1. Tay Valley Township hereby declares a climate emergency.
2. Tay Valley Township commits to continuing and strengthening its efforts to reduce greenhouse gas emissions, promote renewable energy, energy efficiency, and sustainable transportation, and to work towards a more sustainable, prosperous, and resilient future for our community.
3. Tay Valley Township calls on higher levels of government to recognize the urgency of the climate crisis and to take immediate and effective action to address it.
4. Tay Valley Township will work with other municipalities, organizations, and stakeholders to promote climate action and build a more sustainable, prosperous, and resilient region.

This resolution shall take effect immediately upon adoption.

DATED this [DATE] day of [MONTH], [YEAR].

## Green Development Standards

The GECCWG members were asked to identify which Ontario municipalities have Green Development standards to aid the discussion about green building standards.

Toronto, Halton Hills, Whitby, Ajax, Markham, Vaughan, and Brampton are the only municipalities in Ontario with mandatory standards.

However, other municipalities incentivize green building and development standards including Carleton Place, Caledon, Clarington, Guelph, Ottawa, etc. as outlined in the [GDS-toolkit.pdf \(cleanairpartnership.org\)](#)

The Atmospheric Fund (TAF) Toolkit and this one [Home - Codes4Climate \(efficiencycanada.org\)](#) provide step by step engagement processes for Councils and residents to discuss these issues.

Buildings are responsible for 45% of the carbon emissions in the Greater Toronto and Hamilton Area. As we continue to grow, it is crucial to get emissions from new construction under control to meet our 2050 climate target.

**Adopting strong, mandatory green development standards for new buildings is the most powerful climate action we can take to curb increasing emissions.**

Mandatory energy efficiency performance standards are an opportunity for this municipality to reach our 2030 climate commitment. Stronger standards would contribute to our economic prosperity, environmental health, cultural vibrancy and social well-being. New buildings approved today will be part of our town for the next century. Building healthy, resilient, efficient buildings now is far more cost effective than retrofitting them down the road.

I/we strongly support our municipality adopting strong green development standards with mandatory energy performance targets as a key pathway to a healthy, net-zero future.