



**Green Energy Task Force Committee  
Agenda**

**Date and Time** November 7, 2012 at 10:00 a.m.

**Place** County of Frontenac Administrative Boardroom 2069 Battersea Road, Glenburnie

**Members:**

Warden Janet Gutowski

Brad Leonard

Chair David Hahn

Deputy Warden Denis Doyle

Councillor John Inglis

Matt Fiene

Maris Krumins

Page

1. Call to order

2. Adoption of the agenda

3. Disclosure of pecuniary interest and general nature thereof

4. Deputations and/or presentations

- Ian Scott, LAS - Green Energy Act Requirements

5. Closed meeting

6. Adoption of minutes

- 12-09-05 Green Energy Task Force Meeting Minutes ACCEPTED BY COUNTY COUNCIL

7. Business arising from the minutes

8. Communications

9. Reports/Topics for Discussion

- Green Energy Task Force - 2012 Work Plan Update
- 2013 Proposed Work Plan

10. Other business

11. Next meeting date

12. Adjournment

2-24

25-28

29-56

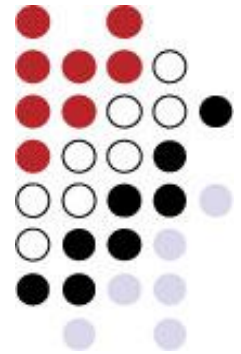
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# Are you ready for the 1 July, 2013 energy report deadline?



Green Energy Task Force  
County of Frontenac  
7 November 2012

Ian Scott

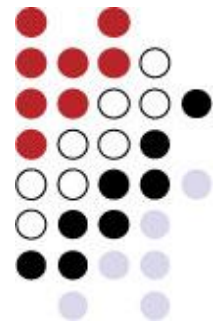


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# Energy Planning Regulatory Requirement



- Energy Conservation and Demand Management Plans (Reg 397/11) Regulation under *Green Energy Act* requires:
  - The first report due July 1, 2013: Energy Consumption and GHG Emission Template.
  - The second report due on July 1, 2014 energy conservation and demand management plans.



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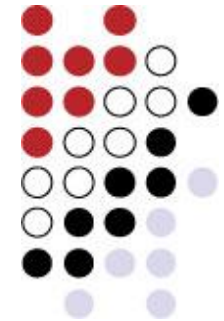
# Regulatory Requirement—GEA



- Phased reporting requirements to allow municipalities to develop capacity

## Phase One

- Energy consumption and GHG emissions for the following municipally owned and operated facilities:
  - offices
  - libraries, arts and culture facilities;
  - emergency medical services, fire, police;
  - community centre, arena, indoor pool, multi-use recreation complex;
  - public works/transit garage; and
  - water pumping and water treatment



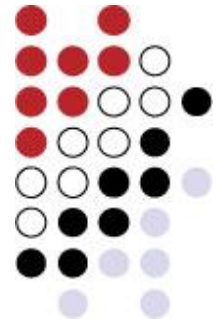
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# Regulatory Requirement—GEA



## Phase One (continued)

- Applies to all facilities that are heated and cooled
- Municipalities could voluntarily add other facility types
- In addition to energy consumption municipalities would report on the size and use of their facilities (e.g., hours of use).
- Water/wastewater unique see Sec 5.3.8
- Report ***due July 1, 2013 using 2011 data***



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Draft

Energy Consumption and GHG Emission Template

Operation Name/ Type	Address	Total Floor Area <sup>1</sup>	Operation Hours of Use (e.g., 9-5, 24/7, ice hours for arenas)	School and Hospital Attributes <sup>2</sup>	Energy Type	Energy Purchased in Natural units	Energy consumed kWh/yr or (ekWh/yr) <sup>4</sup>	GHG Emissions (tonnes CO2e/yr) <sup>5</sup>	GHG Intensity (tonnes CO2e per year/sqf) <sup>6</sup>	Energy Intensity (eKh per year/sqf) <sup>7</sup>
					Electricity <sup>3</sup>	kWh				
					Natural Gas	M3				
					Steam	mega pounds				
					Propane	litre				
					Fuel Oil	litre				
					Chilled water	Ton hours				
					Wood	metric tonne				
					Coal	metric tonne				
Total by Operation Type										
Overall Agency Totals										

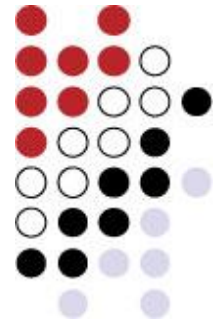
1. Total floor area of indoor space in which the operation is conducted. For water and sewage works would report water distributed and sewage treated annually in mega litres.
2. Schools should note the number of temporary accommodations, and if a pool is part of school. Hospitals should note if they are chronic or acute care facilities, or both
3. Electricity consumed should be in kWh not adjusted for line losses
4. Equivalent kWh will be automatically calculated in the template supplied by Ministry of Energy
5. GHG emission will be automatically calculated in the template factor to be supplied by Ministry of Energy
6. For water and sewage works GHG emissions intensity will be reported as tonnes CO2 equivalent per year/Mega Litre

# Regulatory Requirement—GEA



## Phase Two

- Energy conservation plans **posted** by **July 1, 2014**
  - Updated consumption information
  - CDM goals and objectives
  - Cost/savings estimates for proposed measures
  - Description of any renewable energy used
  - 5 Year Plans, to be approved by Council



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# What is LAS?



- Objective is to help municipalities:
  - *Save Money, Make Money, and Build Capacity*
- A wholly-owned subsidiary of the Association of Municipalities of Ontario (AMO)
- Financial return to AMO



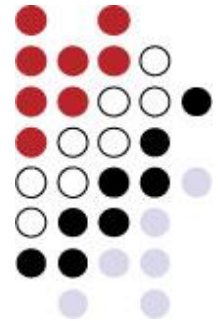
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# LAS

## Save Money, Make Money, Build Capacity



- Energy Consulting
- EPT
- EMT
- Solar
- Electricity
- Natural Gas
- Group Benefits
- Insurance
- Risk Management
- One Investment
- Fuel



[www.las.on.ca](http://www.las.on.ca)



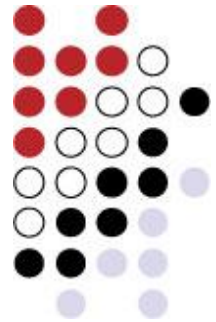
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# EPT

## *The Energy Planning Tool*



**EPT – The Energy Planning Tool** is a web-based application that allows Ontario municipalities to generate Regulation 397/11 compliant reports and plans.



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# Facilities

Facility List					
Name	Description	Address	Building #	Focus	Actions [NEW]
55 Plus Centre	Older Adults	564 Road	56	NO	[VIEW] [EDIT] [DEL]
Grandview	Arena	123 Street	111	NO	[VIEW] [EDIT] [DEL]
Warsaw Roads Depot		1422 County Road #4		NO	[VIEW] [EDIT] [DEL]
Douro Roads Depot		435 Douro Line #4		NO	[VIEW] [EDIT] [DEL]

- Douro-Dummer Town Hall
- While Lake Fire Hall #5
- Warsaw Fire Hall #4
- Donwood Fire Hall #1
- Douro Fire Hall #2
- Fire Hall #3
- Warsaw Community Centre
- Douro Community Centre

## Edit Facility

Name	<input type="text" value="55 Plus Centre"/>
Description	<input type="text" value="Older Adults"/>
Address	<input type="text" value="564 Road"/>
City	<input type="text"/>
Province	ON ▾
Postal	<input type="text"/>
Phone	<input type="text" value="555-555-1212"/>
Building #	<input type="text" value="56"/>
Operations Contact	Tom Dwyer ▾
Energy Team Contact	<input type="text"/>
Focus Building	NO ▾
Photo (JPG Only):	<input type="text"/> <input type="button" value="Browse..."/>
<b>Asset Composition</b>	
10000 (m <sup>2</sup> )	Long-Term Care <span style="float: right;">[DELETE]</span>
500 (m <sup>2</sup> )	Office <span style="float: right;">[DELETE]</span>
Add Type	<input type="text"/> (m <sup>2</sup> )
Total Area (m <sup>2</sup> )	10500



## Facility List & Details

Upload data for each of your facilities. **Key function to use for 2013 report.**



# Projects

Projects List										
Description	Asset	Contact	Start	End	Status [%]	Cost	Save(GJ)	Save(\$)	ROI	Actions [NEW]
<a href="#">Pump Retrofit</a>		Stephen Dixon	2009-07-23	2009-06-30	Pen [10%]	15,000.00	200.00	5,000.00	3 yr	edit
<a href="#">Lights Off Campaign</a>		Stephen Dixon	2009-07-10	2009-07-15	Act [50%]					
<a href="#">Heat Recovery Systems</a>		Stephen Dixon	2009-08-01	2009-12-31	Pen [0%]					


## Project List & Details

Create, track and monitor energy projects. Assign a staff leader.

Each project record includes information on cost, energy savings, and return on investment.

Use this and other functions for 2014 energy plan.

**Edit Project**

Description	<input type="text" value="Pump Retrofit"/>	
Asset	<input type="text" value=""/>	
Category	<input type="text" value="Short Term"/>	
Contact	<input type="text" value="Stephen Dixon"/>	
Start Date (YYYY-MM-DD)	<input type="text" value="2009-07-23"/>	
End Date (YYYY-MM-DD)	<input type="text" value="2009-06-30"/>	
Photo (JPG Only):	<input type="text" value=""/> <input type="button" value="Browse..."/>	
Details	<input style="width: 100%;" type="text" value="Retrofit all fixed speed circulation pumps in the rink to Variable Speed Drives."/>	
Estimated Cost	<input type="text" value="15000.00"/>	
Est. Savings (GJ)	<input type="text" value="200"/>	
Est. Savings (\$\$)	<input type="text" value="5000.00"/>	
ROI	<input type="text" value="3"/> YEARS	
Status	<input type="text" value="Active"/>	
Percent Complete	<input type="text" value="10%"/>	
Last Update (YYYY-MM-DD)	<input type="text" value="2010-03-24"/>	
<input type="button" value="submit"/>		

**Project Documents**

Document Filename	Action
Energy Improvement Bill 150.doc	<a href="#">[VIEW]</a> <a href="#">[DELETE FILE]</a>



# Programs

Sam McKnight Energy Planning Tool Logout


Home	Municipality	People	Facilities	Programs	Processes	Projects	Library	Reports
<b>Programs List</b>								
Description	Facility	Contact	Date	Status	Actions [NEW]			
<a href="#">Energy Committee Meeting</a>		Stephen Dixon	2009-06-30	Completed		<a href="#">edit</a>		<a href="#">x</a>
<a href="#">Energy Audit</a>		Sam McKnight	2009-07-05	Active		<a href="#">edit</a>		<a href="#">x</a>
<a href="#">Council Workshop</a>		Stephen Dixon	2009-10-05	Pending		<a href="#">edit</a>		<a href="#">x</a>
<a href="#">Education campaign</a>		Sam McKnight						

## Program List & Details

Create and track programs such as meetings, workshops and audits that further plan creation and implementation.

Each program assigned an asset, a staff lead, and length.

**Edit Program**

Description	Energy Audit	
Facility	<input type="text"/>	
Category	<input type="text"/>	
Project	<input type="text"/>	
Contact	Sam McKnight	
Program Date (YYYY-MM-DD)	2009-07-05	
Photo (JPG Only):	<input type="button" value="Browse..."/>	
Details	Audit by recreation energy specialists. This audit will be comprehensive and look at all areas of energy consumption.	
Status	Active	
<input checked="" type="checkbox"/> <input type="button" value="submit"/>		

# End Product: 2013 Annual Report

## Energy Consumption and GHG Emissions

Facility Name	Address	Built	Total Area (m2)	Hours/Day	Fuel Types	Consumption	Emission Factor	Energy (ekWh/yr)	GHG Emissions (tonnes CO2e/yr)	GHG Intensity (tonnes CO2e/m2)	Energy Intensity (ekWh/m2)
Facility Primary Type: Long-Term Care											
55 Plus Centre	584 Road		10500		NG	293882 m <sup>3</sup>	1.86	3026984.60	546620.52	288.28	52.06
					Electricity	85656 kWh	0.21	65656.00	13787.76	6.25	1.31
Grand Total:								3092640.60	560408.28	294.54	53.37

Fulfill Ministry of Energy’s Requirement for the following in your annual report:

- Address, total floor area, hours of use, and type of operation
- Amount of energy used by type
- Amount of greenhouse gases emitted with respect to types of energy purchased and consumed per facility

# End Product: 2014 Strategic Plan

Fulfill requirement for the following in your energy plan:

- Data from energy report(s)
- CDM goals and objectives
- Proposed CDM measures
- Confirmation of Council Approval

## Energy Management Plan

Township of Douro-Dummer

2011-09-22

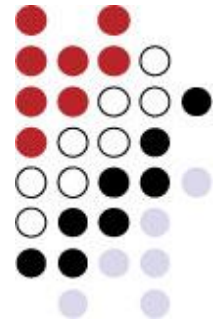
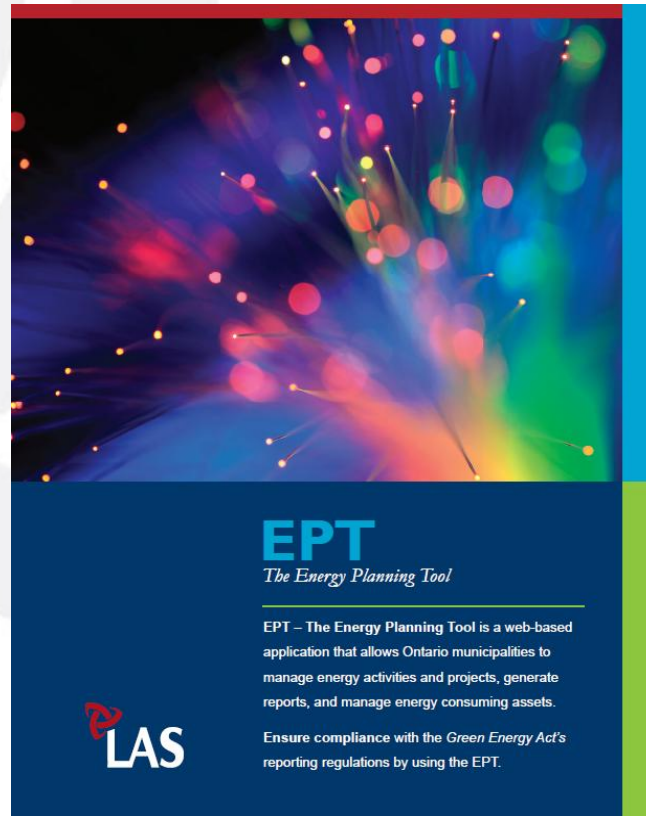
### Commitment

- *Declaration of Commitment:* Test 123  
*See Reference Document: Resolution.doc*
- *Vision :* We exercise stewardship in our use of finite energy resources in order to demonstrate leadership, optimize our delivery of services, and enhance the overall quality of life in our community.
- *Policy:* We will incorporate energy efficiency into all areas of our activity including our organizational and human resources management procedures, procurement practices, financial management and investment decisions, and facility operations and maintenance.
- *Goals:* To continuously improve the energy efficiency of our facilities by utilizing best practices (management/policy, technical, organizational), in order to reduce our operating costs, energy consumption and the reduction of greenhouse gas emissions. We will seek opportunities to reduce fossil fuel use by utilizing any renewable energy sources available.
- *Overall Target:* 1. Initial target for 2014, before end of council term (XX% reduction in consumption from baseline year, 2008) 2. Longer term target of 2018 to align with another council term
- *Objectives:*
- *Stakeholder Needs:* Internal stakeholders (Council, committees of council, CAO, staff) need to be able to clearly communicate the corporate commitment to energy efficiency, to maintain awareness of energy use and to develop the skills and knowledge required to implement energy management practices and measures.  
*See Reference Document: Corporate Energy Plan- notes.doc*
- *Our Municipal Energy Needs :* We need reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible  
*See Reference Document: Current Consumption.xls*

# EPT Now Available



- Annual subscription fee per municipality \$200/ year!
- LAS staff can also load data and prepare report

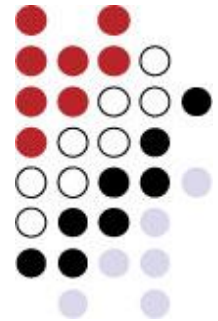


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## Energy Consulting Service (EESPs)



- Essentially roving energy managers to serve the municipal sector
- LAS has hired team of experienced energy professionals to help municipalities struggling with energy management
- This project was made possible through the financial support of the Ontario Power Authority.



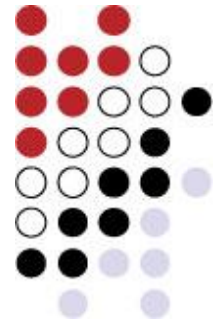
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## Energy Consulting Service (EESPs)



### We can help with the following:

- Building audits and walk-through facility assessments;
- Identification, assessment, and recommendation of energy saving opportunities and funding sources;
- Creation of energy conservation and management plans;

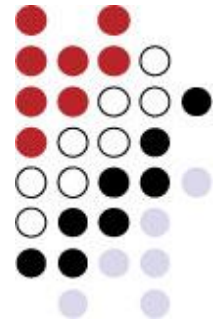


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## Energy Consulting Service (EESPs)



- Applying for energy efficiency incentive programs;
- Collection, analysis, and reporting of energy bill data;
- Tracking, reporting and evaluating projects;
- Service provider & equipment procurement;
- Delivery of building occupant-, operator-, and or management-focused training.

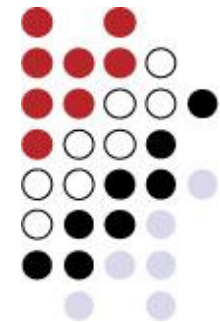


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# Energy Consulting Service (EESPs)



Service	Notes	Amount	Cost
Site Visits	walk-through Audits of mutually agreed sites	Reasonable # facilities covered in a day	Free
EPT Data Loading	LAS staff load data (spreadsheet supplied and/or in LAS Program) into EPT	15 facilities	\$500 (+HST)
		each additional facility	\$30 (+HST)
	Until End of October	Intro Offer: 30 facilities	\$500 (+HST)



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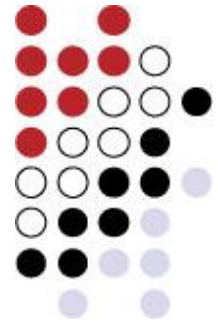


## EMT: Energy Management Tool

The key tool to track, measure and manage all your facilities energy, water and GHG needs



**EMT** – web accessible tool to track & manage all commodities (electricity, natural gas, water, propane, diesel) at a facility or aggregate level



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# EMT: Energy Management Tool

The key tool to track, measure and manage all your facilities energy, water and GHG needs



## MEASURE:

### Electricity:

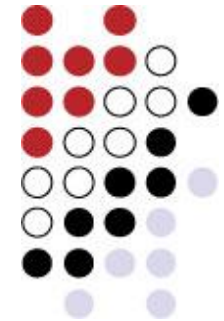
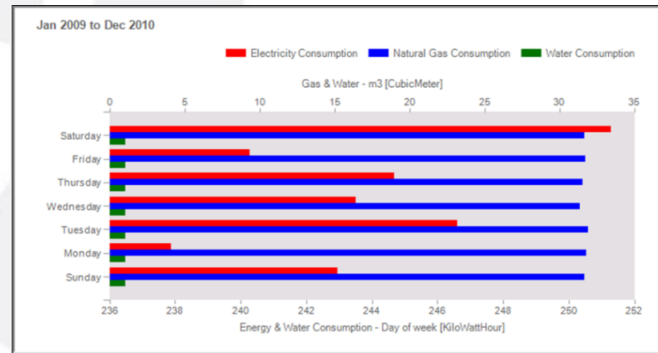
- Energy – kWh
- Demand – kW, kVA, kVAR
- Power Quality

### Natural Gas:

- Energy – m3
- Demand – not applicable to most

### Water:

- Consumption – m3



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# Recap: Getting Started

## *1. Gather Your Information*

- Facilities List
- Baseline Energy Data (from billing sources)

## *2. Build Your Team*

- Create an Energy Team to lead/guide the process, provide feedback, and encourage buy-in and/or...

## *3. Consider Outside Supports*

- LAS' EPT, Energy Consultants, EMT
- Ministry, Utilities, consultants

# For More Information

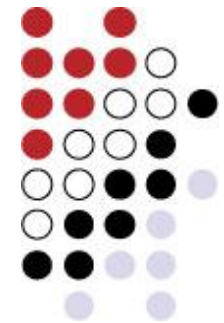


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**MINUTES OF THE GREEN ENERGY TASK FORCE ADVISORY COMMITTEE**  
**September 5, 2012**

A regular meeting of the Green Energy Task Force Advisory Committee of the County of Frontenac was held in the Frontenac Room of the County Administrative Office, 2069 Battersea Road, Glenburnie on Wednesday, September 5, 2012 at 10:00 a.m.

**In attendance:**

- David Hahn, Chair
- Warden Janet Gutowski
- Councillor John Inglis
- Maris Krumins, Community Member
- Brad Leonard, Community Member
- Matt Fiene, Community Member

**Regrets:**

- Deputy Warden Denis Doyle

**Staff:**

- Elizabeth Savill, CAO/Clerk
- Alison Vandervelde, Communications Officer
- Angelique Tamblyn, Executive Assistant (Recording Secretary)

**1. Call to order**

The Chair called the meeting to order at 10:00 a.m.

**2. Adoption of the agenda**

The agenda was received.

**3. Disclosure of pecuniary interest and general nature thereof**

The Chair requested that it be noted that no member of the Committee declared a pecuniary interest.

**4. Deputations and/or presentations – Nil**

**5. Closed meeting – Nil**

**6. Adoption of minutes**

Committee Recommendation

THAT the minutes of the meeting of May 2, 2012 be adopted as presented.

CARRIED

Green Energy Task Force Advisory Committee  
September 5, 2012

ACCEPTED BY COUNTY COUNCIL October 17, 2012

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7. **Business arising from the minutes**

Grid capacity link information provided by Mr. Leonard.

8. **Communications**

**Ontario Newsroom - Ontario Named Canada's Greenest Province**

[Click here to view website](#)

**Toronto Star Article - Province proposes new path for financing energy**

Deputy Warden Doyle expressed his hope that the province might introduce amendments to legislation to allow municipalities to support and encourage their residents to invest in green energy options as is the case in Halifax. Deputy Warden Doyle has connected with a consultant who suggests opportunities may exist to pilot a rural project and that funding may be available through FCM. He advises that he will continue to work with the consultant. The City of Toronto has been breaking ground by offering repayable loans to a range of projects for the commercial sector also. Councillor Inglis shared that the North Frontenac committee is also discussing these types of incentives.

**Committee members agreed** that they could take on an advocacy role and continue to learn more about the programs operating in other jurisdictions.

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee recommend that the Council of the County of Frontenac consider the following resolution:

WHEREAS Council of the County of Frontenac is committed to the sustainability of the region and supports alternative energy initiatives;

AND WHEREAS opportunities can be offered by municipalities to encourage their residents and commercial/business enterprises to make investments to reduce energy demands through alternative heating and cooling options and through solar hot water solutions;

NOW THEREFORE Council of the County of Frontenac urge the Province of Ontario to introduce a program(s) that would permit municipalities to offer incentives through repayable loans to their residents and commercial/business enterprises to invest in alternative energy projects;

AND FINALLY that this resolution be circulated to the Townships of Frontenac for their consideration.

CARRIED

9. **Reports/Topics for Discussion**

**2012 Work Plan Update**

The following updates were provided by committee members:

- Mr. Leonard will work with staff to add information for the next update report

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Green Energy Task Force Advisory Committee  
September 5, 2012

ACCEPTED BY COUNTY COUNCIL October 17, 2012

Page 2 of 4

- Committee members discussed their mandate to advise community members of the committee's activities
- The Chair stated that the agenda format and reporting are themselves communications tools
- Mr. Leonard advised that he has received calls as a result of the GETF brochure developed for the SWITCH conference earlier this year; the brochure continues to be distributed at events attended by staff
- The Warden is networking through twitter and is building relationships with City Council members

**Committee members agreed** to share webinar information as it becomes available from OSEA, AMO, FCM, etc; Mr. Leonard is also on the Canadian solar industry board and will keep others aware of its activities also.

- Councillor Inglis is working to establish a Township solar project on a fire hall roof
- Deputy Warden Doyle advised that the Township of Frontenac Islands has submitted a funding application to add a roof with solar panels (250 kw with a 7-8 year payback) over the rink on Wolfe Island
- Mr. Fiene has been planting switch grass
- The Chair agreed to share webinar information as it becomes known
- Councillor Inglis reported on the LAS presentation held in Kingston; software has been developed by LAS that will allow municipalities to meet their obligations under the Green Energy Act; members recognized the task grows with each building owned by the municipality; North Frontenac hired a student over the summer to assist with the collection of information

**Committee members agreed** that staff should investigate whether a joint approach to LAS for its reporting software would be entertained and that the GETF would monitor the Townships and County progress.

- The Chair spoke about his recent discussions with Greg Allen, a consultant with over 30 years of experience and a particular interest in community energy; a draft community plan for Frontenac is being discussed

**Committee members agreed** to invite Mr. Allen to the next GETF meeting.

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee receive the 2012 Work Plan Update report.

CARRIED

**Green Energy Act Compliance Update**

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee receive the Green Energy Act Compliance Update report.

CARRIED

**Solar Power Production**

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee receive the Solar Power Production report.

CARRIED

**Resignation of John Kittle - received August 17, 2012**

Committee members discussed Mr. Kittle's resignation and the resulting vacancy in the position of Vice Chair.

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee accept the resignation of John Kittle as a member of the Committee.

CARRIED

Committee Recommendation

THAT the Green Energy Task Force Advisory Committee recognize Warden Janet Gutowski as the Vice Chair of the Committee.

CARRIED

**10. Other business**

[The Lowdown on FIT 2.0 for Communities, Aboriginal Groups and the Private Sector](#)

The program as it has been defined to date was discussed.

**Preliminary discussion of 2013 Work Plan**

Committee members discussed the 2012 work plan and how it might influence the 2013 plan. Members agreed to send ideas for inclusion in the 2013 GETF work plan to Ms. Savill. A draft plan will be prepared for the November meeting. .

**11. Next meeting date**

November 7, 2012 at 10:00 a.m.

**12. Adjournment**

The meeting adjourned at 12:02 p.m.



**GREEN ENERGY TASK FORCE ADVISORY COMMITTEE REPORT**

**To:** Chair and Members of the Green Energy Task Force

**From:** Elizabeth Savill  
CAO

**Date prepared:** November 4, 2012

**Date of meeting:** November 7, 2012

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**Re:** **Green Energy Task Force – 2012 Work Plan Update**

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**Background**

Council of the County of Frontenac approved the work plan of the Green Energy Task Force (GETF) meeting of March 20, 2012.

**Comment**

Work Plan activities realized to date:

1. **Contribute to the development of a communications plan for the GETF including the strengthening of communications with all stakeholders, including County and Township Councils and community groups**
  - A communications plan for the County is under development.
  - The Warden and staff have met with a communications professional to discuss elements of the plan relating directly to the GETF.
  - Work is being done incrementally to date – a brochure on the GETF has been developed and the County's monthly e-newsletter has featured information provided by the GETF.
  
2. **Continue working with County and Townships on Municipal Solar Installation Projects**
  - Solar installations placed by the County at both the Palace Road and Sydenham ambulance bases (see the Solar Power Production report attached)
  - Rooftop panels installed by the Township of Central Frontenac on its Sharbot Lake fire station
  - Both North Frontenac and Frontenac Islands are exploring installations
  - County staff is sitting on the FIT2.0 Land Use Working Group; recommendations and advice are being made to the Minister of Energy "on alternat[ive] options related to ground-mounted solar PV projects on rural zoned lands with multiple primary uses in rural/agricultural zoned lands with abutting residential uses"

- Installation opportunities are being explored as part of the revised concept plan for the Fairmount Auditorium (see the Consulting Services Seeking Energy Cost Reductions report attached)
- 3. Continue work towards Economic Development of the Energy Sector in the Frontenacs**
- The Chair and Rena Upitis met with the Director of the Limestone District School Board to discuss a possible partnership with Wintergreen Initiative Co-op to install PV panels on LDSB facilities
  - The Chair and Deputy Warden Doyle met with Ernestown Windpark representatives to tour the project site and discuss partnership opportunities (April 23)
  - The Chair and others met first with TREC representatives then with Ernestown representatives in Toronto to work on a joint venture (June 22)
  - The Wintergreen Co-op Steering Committee (August 3)
  - The Chair and others met with TREC and Horizon in Toronto to discuss the joint venture with Wintergreen Co-op (August 20)
- 4. Continue to liaise with key groups - County's SAC, New Energy Project, SWITCH, EcoPerth, TREK, 401 Energy, Wintergreen, LDSB/ESAC, etc**
- SAC: linkages between the committees were drawn during County budget deliberations and continue as green energy and GHG issues arise and through the annual workshop
  - New Energy Project: its funding proposal was turned down putting this initiative on hold
  - SWITCH: February 3 meeting dealing with the Passive House design (the Chair)
  - TREC: see below
  - 401 Energy
  - Wintergreen: see below
  - LDSB/ESAC: March 1 meeting (the Chair)
  - OSEA: February 7 telephone meeting with Nicole Riese
- 5. Seek opportunities to gain insights into Green Energy through webinars, conferences, workshops, etc**
- OSEA webinars: February 10; April 26 fixing municipal powers in RE projects; new FIT2.0 rules (the Chair)
  - Cooperative Network for Community Power (CNCP): February 14; May 23; June 20 (the Chair)
  - SWITCH: March 18-19 Green Profit Conference (the Chair, Deputy Warden)
  - OPA webinar: April 13 (the Chair)
  - TREC webinar: May 3 Community Corporate Partnerships (the Chair)
  - Community Energy Network Retreat (Wintergreen): June 8-9 (the Chair, Vice Chair, Deputy Warden Doyle, Councillor Inglis)
  - The Province has announced the FIT2.0; County staff attended the SWITCH legal seminar on November 5<sup>th</sup>
  - The Committee Recommendation supported at the September 5<sup>th</sup> GETF meeting will go to Council on November 21<sup>st</sup>
- 6. Energy Efficiencies - Research and advise County-level response to *Green Energy Act* Regulation 397/11; explore possible coordination between Townships and County, continue public promotion of energy conservation**
- Report provided to Council in July
  - Frontenac CAOs met in August and a staff training day subsequently held on October 30<sup>th</sup> presented opportunities to continue the conversations; support to each other being offered

- County staff met with Queen's and SLC representatives involved in a research project intending to comprehensively measure GHG emissions throughout the region since 1991 (see Queen's-SLC Project paper attached)

**7. Explore possibilities surrounding a Community Energy Plan and ways to approach initial phases**

- The Chair has entered into discussions with Greg Allen, a returning resident of the region, who is interested in helping with the development of a concept for a community energy plan for the Frontenacs; a concept plan is anticipated before year-end; an opportunity to discuss this with Mr. Allen is scheduled for the November GETF meeting to advance this effort (see Rationale for Community Energy Plan document attached; Mr. Allen's presentation made to the Sustainability Workshop on September 21, 2012 is also attached)

**8. Continue to lobby Hydro One on behalf of the Frontenac Region in regards to grid capacity and connection issues**

- Letter sent to Minister

Major 2012 Calendar Events:

SWITCH Conference\* - attended/participated

Wintergreen Renewable Energy Workshop - attended

OSEA Community Power Conference\*

NOTE: This conference is not being held this year

(\*County funding requested)

**Financial Implications**

Provisions for Advisory Committee activities have been included in the 2012 budget.

**Committee Recommendation**

THAT the Green Energy Task Force Advisory Committee receive this 2012 Work Plan Update report for information only.



**GREEN ENERGY TASK FORCE COMMITTEE REPORT**

**To:** Chair and Members of the Green Energy Task Force

**From:** Elizabeth Savill  
CAO

**Prepared by:** Peter Young  
Community Planner

**Date prepared:** November 5, 2012

**Date of meeting:** November 7, 2012

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**Re:** Solar Power Production – Sydenham and Palace Road Ambulance Bases

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**Background**

At its July 21, 2010 meeting, County Council approved the County's participation in a County-led microFIT project initiative to install at least one roof-top MicroFIT project in each participating Township and one in the County.

Construction began in late 2010 on a ground-mounted solar project at the new Sydenham Road ambulance base in South Frontenac, with completion in April 2011. A roof-mounted solar project was constructed in 2011 on the roof of the Palace Road ambulance base in Kingston.

The contract for the Sydenham base was awarded to Isolara Solar Power with a bid of \$79,689. The contract for the Palace Road base was awarded to Evergreen Power Ltd. with a bid of \$58,950. The total cost for both projects was \$138,639.

**Comment**

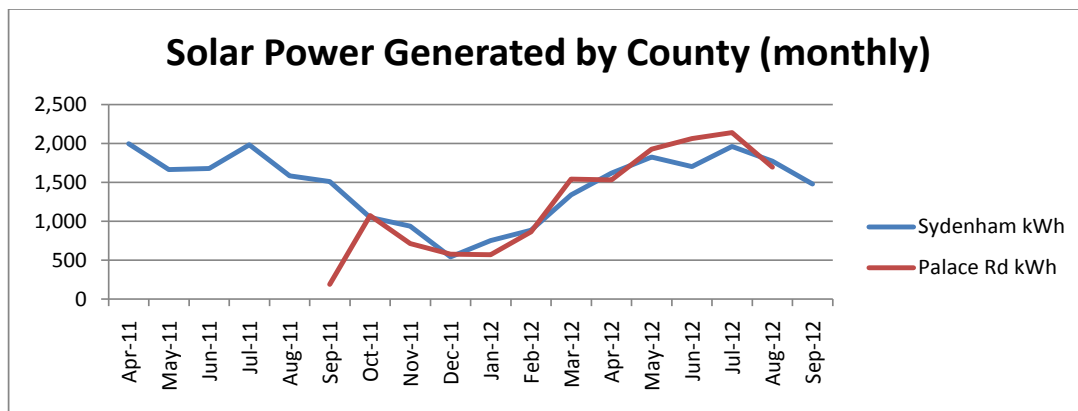
To the end of September 2012, the County has been paid \$28,796 for the energy produced by these two projects, or approximately 21% of the total project cost.

Combined, the projects have produced 41,146 kWh. Please note that all dollar amounts in this report exclude HST.

Month	Sydenham kWh	Sydenham \$	Palace Rd kWh	Palace Rd \$	Total monthly kWh	Total monthly \$	kWh to date	\$ to date
Apr-11	*1,995	*\$1,281			1,995	\$1,281	1,995	\$1,281
May-11	1,663	\$1,068			1,663	\$1,068	3,659	\$2,349
Jun-11	1,678	\$1,077			1,678	\$1,077	5,336	\$3,426
Jul-11	1,980	\$1,271			1,980	\$1,271	7,317	\$4,697
Aug-11	1,582	\$1,016			1,582	\$1,016	8,898	\$5,713
Sep-11	1,511	\$970	*190	*\$152	1,701	\$970	10,599	\$6,683
Oct-11	1,050	\$674	1,071	\$859	2,121	\$826	12,720	\$7,509
Nov-11	938	\$602	712	\$571	1,650	\$1,461	14,370	\$8,970
Dec-11	542	\$348	577	\$463	1,119	\$919	15,489	\$9,889
2011	12,939	\$8,307	2,551	\$2,046	15,489	\$9,889		
Jan-12	751	\$482	569	\$457	1,320	\$945	16,809	\$10,834
Feb-12	885	\$568	864	\$693	1,749	\$1,025	18,558	\$11,859
Mar-12	1,340	\$860	1,540	\$1,235	2,880	\$1,553	21,438	\$13,412
Apr-12	1,618	\$1,039	1,529	\$1,226	3,147	\$2,274	24,585	\$15,686
May-12	1,823	\$1,171	1,927	\$1,546	3,750	\$2,397	28,336	\$18,083
Jun-12	1,702	\$1,093	2,062	\$1,654	3,764	\$2,638	32,100	\$20,722
Jul-12	1,961	\$1,259	2,138	\$1,715	4,099	\$2,913	36,199	\$23,634
Aug-12	1,773	\$1,138	1,696	\$1,360	3,469	\$2,853	39,668	\$26,487
Sep-12	1,478	\$949	n/a	n/a	1,478	\$2,309	41,146	\$28,796
2012	13,330	\$8,558	12,326	\$9,886	25,657	\$18,907		

\*Partial or combined month

Note: All figures exclude HST



**Committee Recommendation**

THAT the Green Energy Task Force Committee receive this *Solar Power Production – Sydenham and Palace Road Ambulance Bases* report for information only.



**GREEN ENERGY TASK FORCE ADVISORY COMMITTEE REPORT**

**To:** Chair and Members of the Green Energy Task Force

**From:** Elizabeth Savill  
CAO

**Prepared by:** Marian VanBruinessen  
Treasurer

**Date prepared:** November 5, 2012

**Date of meeting:** November 7, 2012

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**Re:** **Green Energy Task Force – Consulting Services Seeking Energy Cost Reductions**

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**Background**

The County was involved in the LAS Audit++ Energy assessment program in 2009. At that time there were a number of strategies identified that provided the opportunity for energy savings and many of these strategies were implemented.

**Comment**

There are a number of firms offering their services to identify potential energy cost savings with varying payment/reimbursement arrangements.

Recently, the County was approached by one such firm and was offered an unsolicited proposal for consideration. The County's procurement policy would require a competitive process so this discussion is not whether to enter into a contractual arrangement at this time but whether to further explore this type of opportunity.

The firms in the market are generally offering to review the County's utility invoices to identify potential cost savings. Compensation in this case is through a Performance Fee of 50% of each refund received as a result of the implementation of a recommended action and by a Performance Fee of 50% of each savings realized through the implementation of a recommended action for a period of 24 months, or the duration of the savings, whichever is less. In addition, if the County entered into a third party deregulated agreement, the firm would look for compensation through a Broker's Commission payable by the supplier.

This type of work has been contracted by a number of Ontario municipalities and is shared through tradeshows at the various municipal conferences. It might also represent an opportunity to undertake a collaborative project with all of the Townships of Frontenac. However, It does require a level of expertise that does not reside in-house at the County.

As an aside, the County has contracted for an evaluation of its current utility contracts with a separate contractor to consider opportunities including bulk purchasing for gas, entry into spot markets for electricity, etc. This work will be completed shortly.

**Committee Recommendation**

THAT the Green Energy Task Force receive this report for information and provide feedback on the value of undertaking the utility audit.

Activities		Units	Fuel Type	Activity Data
Residential	Heating	oil (litres), natural gas (cubic metres), propane (cubic meters), wood (cords), electricity (kWh)		
	Electricity Use	kWh		
	Transportation	Cars gal of fuel or km Trucks gal of fuel or km Boats gal of fuel or km		
Commercial/Industrial	Building Heating/Cooling	oil (litres), natural gas (cubic metres), propane (cubic meters), wood (cords), electricity (kWh))		
	Building Electricity Use	kWh		
	Transportation (Vehicle Fleet)	Cars gal of fuel or km Trucks gal of fuel or km Boats gal of fuel or km Planes gal of fuel or km		
	Maintenance and Construction	Equipment Use gal of fuel Cement Production tonnes		
Agricultural	Livestock	# of pigs # of cows # of sheep		
	Equipment Use	gal of fuel		
Waste Management	Landfilling	acre or hectares of land		
	Incineration	tonnes		
	Composting	tonnes		
	Wastewater Treatment	type, digester gas (m3/day) or population served		
	Septic Systems	# of households		
Others	Transport	gal of fuel or km		
	Forestry	Wood Decay tonnes of wood Equipment Use gal of fuel or # of machines used		
	Trans-boundary Traffic	Cars # of vehicles Trucks # of vehicles Boats # of boats Planes miles/km Trains km of track		
	Wood Burning	tonnes of wood		
	Private Sewage Lagoons	tonnes of waste		
	Natural Gas Transmission (Transient)	cubic metres		

## **RATIONALE FOR UNDERTAKING A FRONTENAC COMMUNITY ENERGY PLAN**

### **BACKGROUND**

Arguably, the greatest challenge we currently face, globally and locally, is the transition to a prosperous economy that is not dependent on fossil fuels. The declining productivity of new sources and existing reserves is accompanied by higher input costs and losses of natural capital. Because our modern industrial system was founded on increasing exploitation of hydrocarbons, we now require large, low-cost, energy inputs for all of our basic needs, production, and social and material services. There are no realistic replacements and the efforts to sustain production through unconventional sources come at increasing costs - economic, social, and environmental. The only compelling solution is to radically improve our energy productivity in order to lower demand and to replace supply with sustainable, renewable, and local energy resources. This will require a comprehensive and systemic change to our economy and infrastructure. It will also entail diverting energy investment into the technological transformation itself.

A successful outcome will be accompanied by solutions to many of our most pressing problems.

1. Climate change mitigation is only practically achievable by decreasing current greenhouse gasses in the atmosphere primarily by eliminating anthropogenic emissions and secondarily by sequestering them. CO2 balance will return once we no longer burn hydrocarbons. Both methane and nitrogen oxides, numbers 2 and 3 GHG emissions, are closely associated with our current hydrocarbon-based food system.
2. Our current financial system is inextricably tied to growth in production and trade which has been dependent on increasing quantities of energy input. The recent crisis is understood by many to have been precipitated by the 2008 spike in oil prices which came about by a speculated supply shortfall in the face of growing demand in Asian economies. North American and European natural gas prices were similarly experiencing upward pressure. Most geologically-based industry analysts believe we have reached, or soon will reach the global peak in hydrocarbon fuel production; consequently, there will be a recurring retreat from economic recoveries.
3. Because Canada is tied into North American oil, gas, and coal trade and eastern Canada relies on oil imports, we are exposed to international fuel pricing and curtailments. In the absence of a national energy plan, Ontario remains vulnerable to impacts of affordability and availability of supply. Our electrical system is now very much reliant on natural gas for generation dispatch so that prices and reliability are directly linked. Energy security and affordability will best be achieved by phasing out reliance on hydrocarbons and implementing a local, conserving, and renewable-energy based infrastructure.
4. Local economies will be improved by the optimization of energy efficiency and productivity, the development of sustainable energy production, and the replacement of energy-intensive infrastructure. The use of local skills, labour, and resources will generate employment and incomes to the community. Fewer dollars will be exported for the purchase of energy and other products and services. Energy production income may be returned to community-based

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Paper prepared by Greg Allen for GETF discussion November 7, 2012

enterprises. Ultimately, the savings to public and private energy spending will benefit the whole local economy and enable further investment in the welfare of the community and preservation of its land base.

5. Since most of the transformation is at the local level, the citizenry will have greater say in what, where, and how development proceeds. This should improve outcomes through local knowledge, conflict resolution, and cooperation. There may be social benefits through responsiveness to needs of neighbours. Sensitivities to natural and cultural heritage can be more effectively integrated.
6. Reliance on local, renewable resources will result in unique attributes for each community and its bioregion. Cultural development may spring from the inspirations of place and a unique connectivity to place. The engagement of aboriginal, ancestral, newcomer, and occasional people in the making of a new energy system may result in a richer way of sharing values and gaining trust.

#### PURPOSE OF A FRONTENAC COMMUNITY ENERGY PLAN

The background lays out the case for forging a transition to a sustainable energy base. All scales of society organization, from the UN to the individual, are affected and play a role in formulating and implementing the new directions. The regional level ought to play a seminal role as it is closest to the particulars of local resources and perspectives that pertain to a localized energy economy and infrastructure. Frontenac already has initiated a number of components related to supporting the transition. These and related elements of *Directions for Our Future* would benefit from integration into a larger planning framework. Here are a few aspects of what an overarching energy plan may contribute.

1. Setting a clearly defined vision and objectives that attends to context.
2. Establish a comprehensive and inter-related assessment of status, mapping, and metrics.
3. Engaging the broader community and stakeholders.
4. Examining opportunities and barriers.
5. Developing priorities, timelines, and goals.

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Paper prepared by Greg Allen for GETF discussion November 7, 2012

# FRONTENAC COMMUNITY ENERGY PLAN

A STRATEGIC PLAN THAT PRESCRIBES THE COUNTY'S ROLE IN FORGING  
THE TRANSFORMATION TO OUR SUSTAINABLE ENERGY FUTURE

BY GREG ALLEN, P. ENG., SUSTAINABLE EDGE, LTD. SEPT. 21, 2012

# THE GREAT TRANSFORMATION

“ If we don't change our energy system in a radical way in the next ten years, the wheel will come off. ”

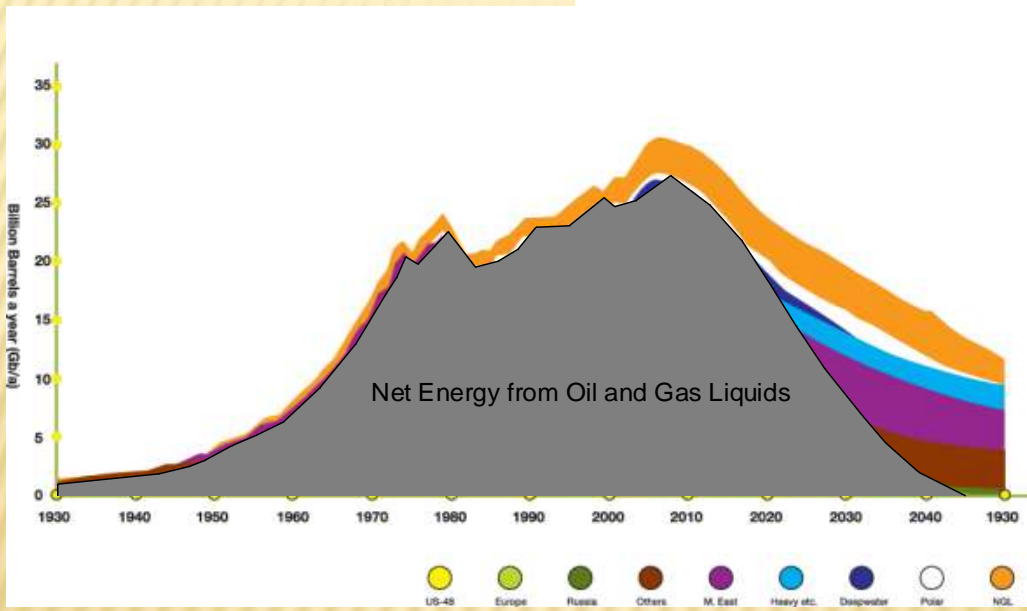
- Fatih Birol, Chief Economist, IEA, 2007

# THE LAST DRAW

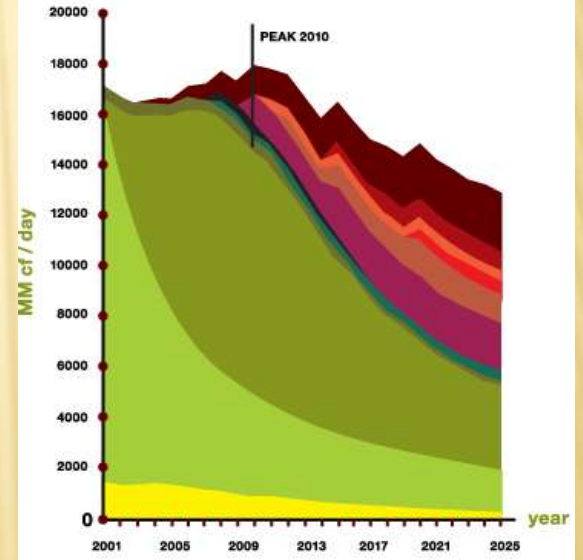


# PEAK FUEL

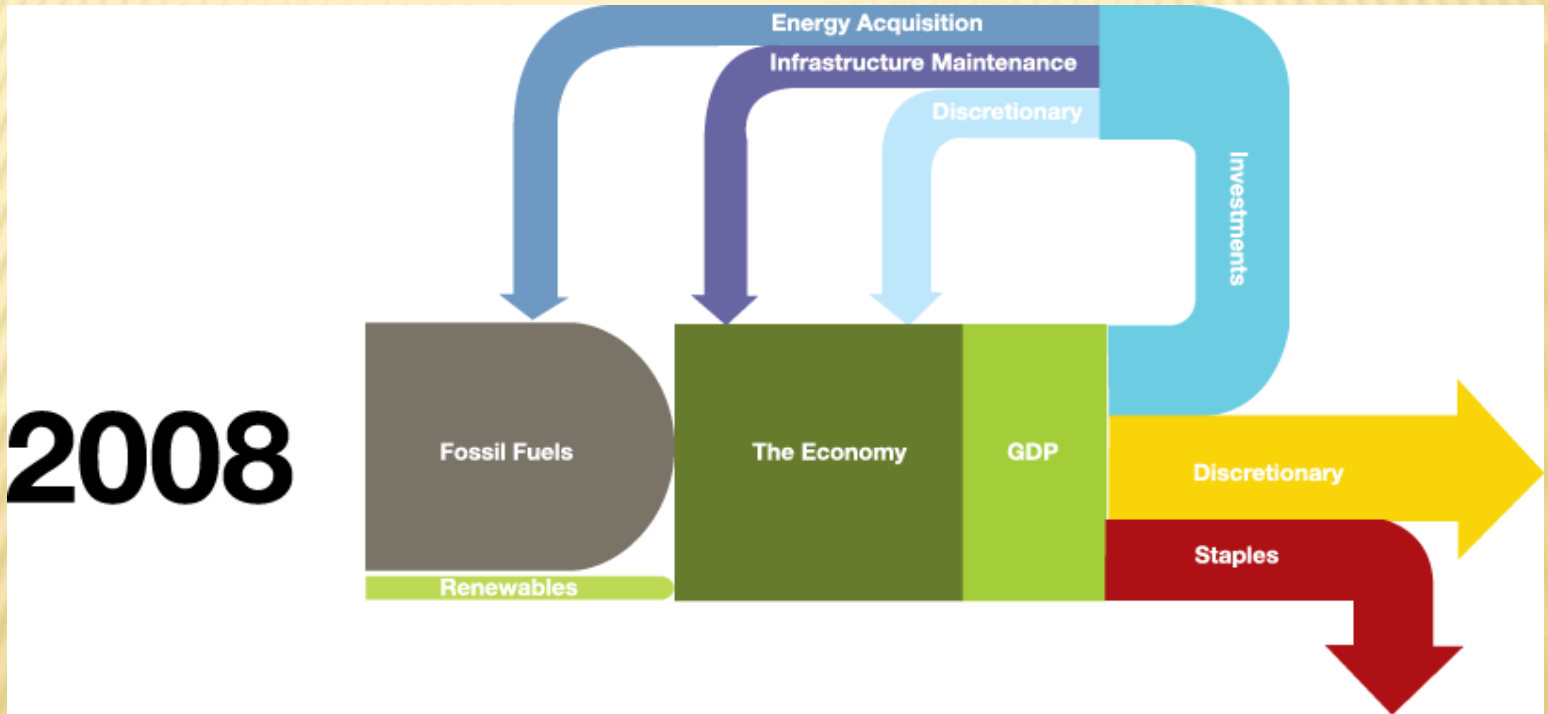
### World Oil



### North American Natural Gas



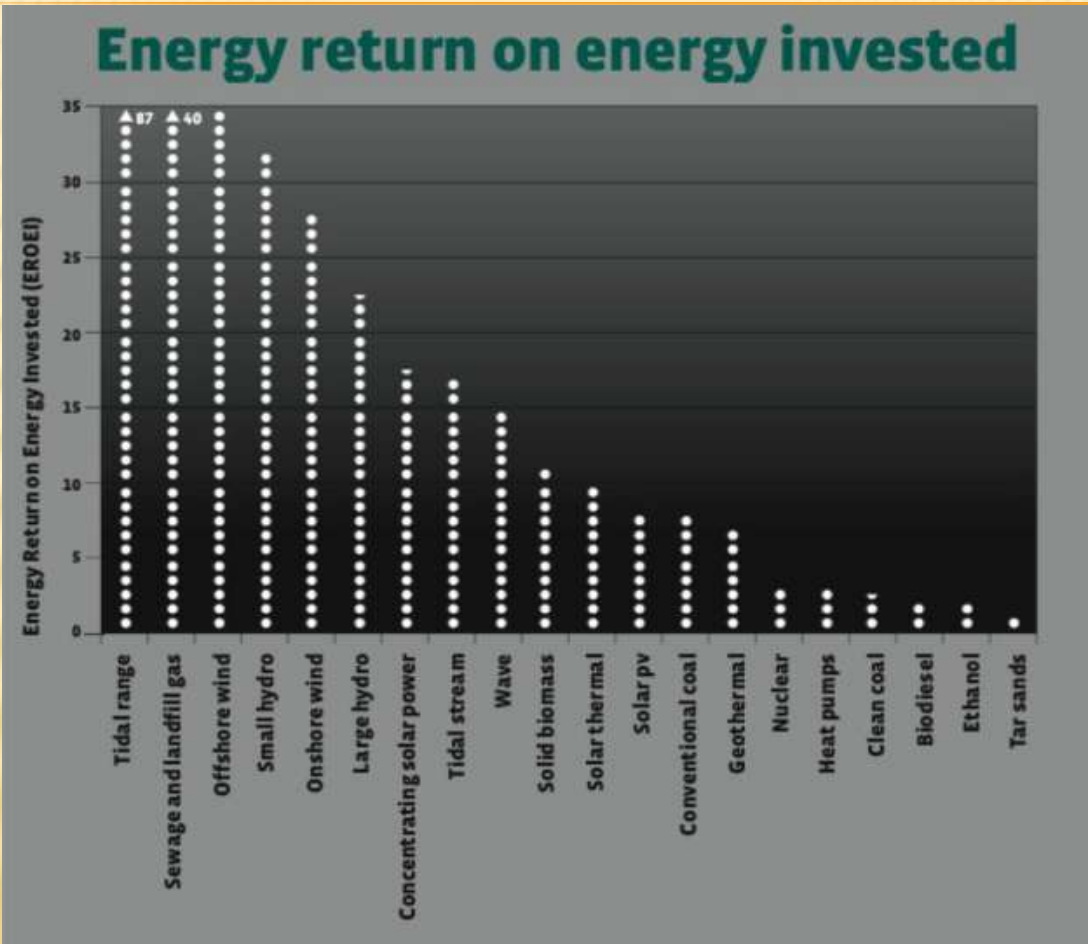
# FUELING THE ECONOMY



# SCOPE: AUTONOMOUS, SELF-MAINTAINING LIFE SUPPORT SYSTEMS



# ENERGY TO PRODUCE ENERGY SERVICES

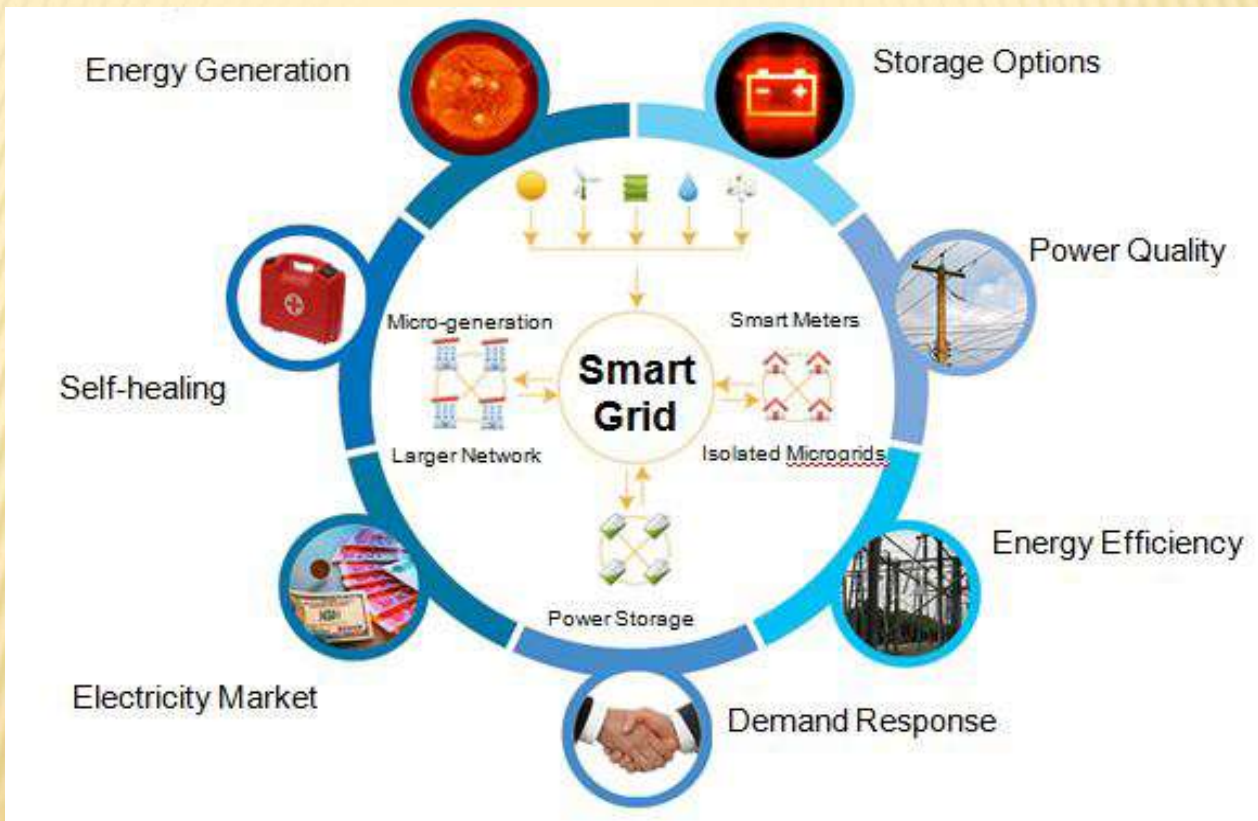


# PRECEPTS

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- ✘ PHASING OUT FOSSIL FUELS WILL AFFECT EVERYTHING
- ✘ END-USE EFFICIENCY IS THE PRIORITY STRATEGY
- ✘ ELECTRICITY WILL DOMINATE ENERGY DISTRIBUTION
- ✘ NETWORKED DISTRIBUTED ENERGY ASSETS WILL DISPLACE LARGE CENTRAL POWER STATIONS
- ✘ OPPORTUNITIES FOR LOCAL ECONOMIC BENEFITS ABOUND
- ✘ QUANTUM NOT INCREMENTAL CHANGE IS NEEDED

# WHAT'S SMART ABOUT THE GRID



# TRANSPORTATION: MENDING OUR WAYS

## BRIDGE OR FERRY

## TRAILS OR RAILS



# BIOMASS COGENERATION SITING



# SITING WIND FARMS



# SITING SOLAR FARMS



# SITING HYDRO POWER



# ENERGY STORAGE IN MARMORA



# HOLISTIC AND COMPREHENSIVE

- ✘ BUILDINGS
- ✘ TRANSPORTATION
- ✘ UTILITIES AND SERVICES
- ✘ AGRICULTURE
- ✘ INDUSTRY AND COMMERCE
  
- ✘ ENERGY MANAGEMENT
- ✘ ENERGY STORAGE AND GENERATION
- ✘ CONSERVATION

# PARTICIPATORY AND RESPONSIVE

- ✘ PLANNING PROCESS ACCESSIBLE AND CONSENSUS SEEKING
- ✘ WELCOME ALL CONTRIBUTIONS AND PERSPECTIVES
- ✘ OPTIMIZE SOCIAL BENEFITS
- ✘ PROMOTE LOCAL ECONOMIC BENEFITS AND EMPLOYMENT
- ✘ DEVELOP PARTNERSHIPS
- ✘ COORDINATE WITH RELATED INITIATIVES

# GREEN ENERGY LEADS TO PROSPERITY





**Green Energy Task Force Advisory Committee  
2013 Proposed Work Plan**

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**Goal/Vision**

The vision of the County of Frontenac stated in *Directions for Our Future* is Fresh with Opportunity Growing Vibrant, Innovative, Natural, Sustainable Places. Within the context of the Values and Principles, the GETF will be guided by the Energy Vision Statement:

*The County of Frontenac is a leader among rural communities in the development, conservation, generation and efficient use of clean, renewable energy that fulfils the community's energy needs. The County of Frontenac's diverse energy systems reduce emissions and externalities on air, water, and the climate.*

**Mandate**

- To further the community's vision of the Energy Focus Area of *Directions for Our Future*.
- To report periodically to County Council and to produce an annual work plan for adoption by Council.

**Proposed Planning Activities for 2013**

1. Maintain expertise in the Green Energy sector ensuring valuable advice can be offered to Council as required (strategically support webinars, workshops and conferences)
2. Offer assistance to the County and the townships on Municipal Solar Installation Projects
3. Develop a concept plan for a Community Energy Plan for the Frontenacs
4. Support economic development opportunities in the energy sector as they arise
5. Publicly promote energy conservation
6. Liaise with like-minded groups including SWITCH; Wintergreen; Limestone school board; etc., including the other County Advisory Committees
7. Maintain an understanding of the grid capacity and connection issues in the County
8. Comment on the draft communications plan being developed for Council's approval in 2013

<b>Proposed Schedule of Meetings</b>	<b>Proposed 2013 Budget</b>	
Wednesday, January 8, 10am	Meet expenses	\$2,000
Wednesday, March 5, 10am	Activities	10,000
Wednesday, May 7, 10am	SWITCH Conference – sponsorship and setup	1,500
Wednesday, July 2, 10am	Wintergreen Renewable Energy Workshop	1,000
Wednesday, September 3, 10am	OSEA Community Power Conference (4 mbrs)	6,000
Wednesday, November 5, 10am	Miscellaneous webinars etc.	500
	<b>Total</b>	<b>\$21,000</b>