6.2 ENERGY CONSERVATION AND PRODUCTION

Scientists agree that the changing trends in weather, commonly referred to as climate change, are having severe negative impacts on the world. Energy consumption continues to increase while traditional energy supplies are becoming increasingly constrained. The need has never been greater to conserve energy and use it wisely and efficiently, and to find more sustainable means of producing energy.

As a result of technological advances and energy deregulation, various forms of renewable energy are now able to provide thermal and electrical power on a site-specific basis, district basis, or as part of a more expansive utility grid system. The social, economic and environmental benefits of using renewable energy technologies in developments are well-documented. Still, these merits must be balanced with assuring the functionality of the technology, and its compatibility with the natural environment and adjacent land uses.

Goal:

To be a leader in energy conservation, energy efficiency, and sustainable energy production, with a strong focus on the development of renewable energy systems that are appropriate in type and scale, and that minimize impacts on the natural environment and adjacent land uses.

Policies:

General

6.2.1. The City promotes the design and orientation of development that:
   a. maximizes passive solar energy gain and minimizes energy loss from prevailing winds; and,
   b. explores opportunities for renewable energy infrastructure on a site-specific or district-wide basis.

6.2.2. The City promotes landscaping and tree planting programs that help to moderate summer and winter micro-climatic conditions.

6.2.3. The City strongly promotes construction techniques that allow development to accommodate more affordable renewable energy technologies in the future.

6.2.4. The City supports public education, pilot projects and demonstration programs that explore ways to use renewable energy infrastructure for development.
6.2.5. The City supports and will promote the use of energy audits to evaluate the energy efficiency of buildings.

6.2.6. The City may give priority to development applications that incorporate renewable energy infrastructure.

6.2.7. The City encourages the installation and operation of energy generation systems to be designed and constructed to minimize impacts on prime agricultural land, on existing agricultural uses or agriculture-related uses, or on mineral or aggregate resources on a property.

6.2.8. When the City has approval authority for a project, the proponent must demonstrate to the satisfaction of the City that:

**Functionality and Compatibility**

a. the proposed energy generation system is functional and compatible in accordance with Section 2.7 of this Plan;

b. if proposed on lands designated on Schedule 3 as Prime Agricultural Area or Mineral Resource Area, that there are no suitable alternate locations on poorer soils on the property to accommodate the proposed energy generation system;

**Support Studies**

c. systems may be required to demonstrate, through appropriate supporting studies, that emissions from dust, noise, contaminants, odour, water, wastewater, stormwater drainage, or solid waste disposal will not have any adverse effects on sensitive uses. Where applicable, a completed Certificate of Approval for emissions will be required prior to the municipality’s consideration of the implementing zoning by-law;

d. systems must be sited in a manner that minimizes visual impacts and are compatible to other uses that may already be established on the site, in addition to the surrounding neighbourhood/landscape character. This will be achieved through siting, architectural design, and landscape/buffer treatments;

**Required Information & Studies**

e. proponents of an energy generation system must submit all required information and studies, in accordance with Section 9.12 of this Plan. The number and scope of the studies and assessments required is to be appropriate and in keeping with the type, scale and complexity of the energy generation system being proposed.

**Peer Review**

6.2.9. In situations when the City has approval powers the City may require a peer review of information or studies submitted in support of the proposed development, to be prepared at the expense of the proponent, and to the satisfaction of the City.

**Zoning By-law**

6.2.10. In situations when the City has approval powers, the implementing zoning by-law will regulate energy generation systems regarding such matters as site area, massing, scale, site coverage, building or structural
height, setbacks, mutual separation, parking and buffering provisions. Site plan review may also be required.

**District Energy**

6.2.11. The City supports and encourages the use of district energy systems.

**Solar Energy**

6.2.A.1. Where solar energy systems are used for the production of thermal energy (heat), these systems may be treated separately through the policies of this Plan and the implementing zoning by-law.

**Passive Solar**

6.2.A.2. The City requires the design and orientation of new buildings and subdivisions in a way that maximizes passive solar energy gain and daylighting.

**Solar-ready Infrastructure**


**Roof-mounted Solar Panels**

6.2.A.4. Nothing in this Plan is intended to restrict the installation, operation or maintenance of a thermal solar energy system that is:
   a. an accessory use to a permitted use or building; and,
   b. mounted directly on the roof of:
      • a principal building; or,
      • each main building in a multiple building project that is on a single landholding.

**Wind Energy**

6.2.B.1. Wind energy systems used for the production of electricity, will be regulated in accordance with provincial and federal regulations.

**Biomass Energy**

6.2.C.1. Biomass energy systems may be used for the production of electricity, thermal energy (heat), or fuel, and any such systems intended for heat production may be treated separately through the policies of this Plan and the implementing zoning by-law. The following policies apply to systems which are intended for heat generation.

6.2.C.2. This Plan is not intended to restrict the installation, operation or maintenance of domestic outdoor wood-burning furnaces, or indoor wood-burning fireplaces, wood stoves, or pellet stoves, provided they comply with the Building Code.
Industrial Use

6.2.C.3. The commercial installation or operation of a biomass energy system for heat production is permitted in General Industrial, Waste Management Industrial, and Rural Industrial designations, as shown on Schedule 3 of this Plan.

Accessory Use

6.2.C.4. The installation or operation of a biomass energy system is permitted as an accessory use to an industrial business or an active farm, provided the lands are designated as General Industrial, Waste Management Industrial, Rural Industrial, Prime Agricultural Area, or Rural.

On-site Consumption

6.2.C.5. Except for the Industrial designations referred to in Section 6.2.C.3, the energy produced by a biomass energy system is primarily for domestic, on-site consumption.

Source of Material

6.2.C.6. Except for the Industrial designations referred to in Section 6.2.C.3, a substantial amount of the biological material used in a biomass energy system should come from the farm on which the generating system is located.

Adjacent to Natural Heritage Features

6.2.C.7. Biomass energy systems are not permitted on adjacent lands next to the natural heritage system identified on Schedules 7 and 8 of this Plan, unless a satisfactory environmental impact assessment has been prepared that demonstrates that there will be no negative impacts on the natural heritage features and areas or on their ecological functions.

Planning Requirements

6.2.C.8. All biomass energy systems are subject to:

a. a zoning by-law amendment that recognizes the site-specific development; and,
b. site plan control review.

6.2.D Geothermal Energy

6.2.D.1. Geothermal energy systems may be used for the production of thermal energy (heat) or electricity, and where such systems are intended to produce heat exclusively, these systems may be treated separately through the policies of this Plan as follows, and the implementing zoning by-law.

6.2.D.2. The installation or operation of a geothermal energy system is permitted in Institutional, Regional Commercial, Arterial Commercial, District Commercial, Business Park Industrial, General Industrial, Waste Management Industrial, Rural Commercial, Rural Industrial, Rural and Prime Agricultural Area, as shown on Schedule 3 of this Plan.
6.2.D.3. Geothermal energy systems are not permitted on lands designated as Environmental Protection Area on Schedule 3 of this Plan, or on adjacent lands to the natural heritage system as identified on Schedules 7 and 8 of this Plan, unless a satisfactory environmental impact assessment has been prepared that demonstrates that there will be no negative impacts on the natural heritage features and areas or on their ecological functions.

6.2.E Hydroelectric Energy

6.2.E.1. Hydroelectric energy systems may be used for the production of electricity, and as such, will be subject to federal and provincial regulations.

6.2.E.2. Nothing in this Section of the Plan restricts the operation or maintenance of the hydroelectric energy system at Kingston Mills, as existing on the effective date of this Plan.

6.2.F Cogeneration Energy

6.2.F.1. Cogeneration energy systems are used for the production of both electricity and thermal energy (heat), however any systems used exclusively for heat production may be regulated through the policies of this Plan and the implementing zoning by-law.

6.2.F.2. Cogeneration energy systems intended for heat production are allowed in all land use designations, subject to the proponent proving to the City's satisfaction that the cogeneration system will not have an adverse effect on neighbouring properties.

6.2.F.3. Cogeneration energy systems are not permitted on lands adjacent to the natural heritage system identified on Schedules 7 and 8 of this Plan, unless a satisfactory environmental impact assessment has been prepared that demonstrates that there will be no negative impacts on the natural heritage features and areas or on their ecological functions.

6.2.F.4. All cogeneration energy systems are subject to site plan control review.

6.2.F.5. Nothing in this Plan restricts the operation or maintenance of the cogeneration energy system based at Queen's University, as existing on the effective date of this Plan.
BY-LAW NO. 2009—

A BY-LAW TO AMEND BY-LAW NO. 8499, “RESTRICTED AREA (ZONING) BY-LAW OF THE CORPORATION OF THE CITY OF KINGSTON” (Zone Change from Special Education and Medical Use ‘E’ Zone to Special Three to Six Family Dwelling ‘B.388’ Zone, 177-179 Alfred Street)

PASSED: month day, year

WHEREAS by Order of the Minister of Municipal Affairs and Housing, The Corporation of the Township of Kingston, The Corporation of the Township of Pittsburgh and The Corporation of the City of Kingston were amalgamated on January 1, 1998 to form The Corporation of the City of Kingston as the successor municipal Corporation and pursuant to the Minister’s Order, any by-laws of the former municipality passed under the Planning Act continue as the by-laws covering the area of the former municipality now forming part of the new City;

AND WHEREAS the Council of The Corporation of the City of Kingston deems it advisable to amend By-Law No. 8499, as amended, of the former City of Kingston;

NOW THEREFORE the Council of The Corporation of the City of Kingston hereby ENACTS as follows.

1. By-Law No. 8499 of The Corporation of the City of Kingston, entitled "Restricted Area (Zoning) By-Law of The Corporation of the City of Kingston", as amended, is hereby further amended as follows:

1.1. Map 30 of Schedule "A", as amended, is hereby further amended by changing the zone symbol of the subject site Special Education and Medical Use ‘E’ Zone to Special Three to Six Family Dwelling ‘B.388’ Zone, as shown on Schedule "A" attached to and forming part of By-Law No. 2009—.

1.2. By Adding a new subsection Part VII, Section 388 thereto as follows:

“(388) 177-179 Alfred Street

Notwithstanding the provisions of Sections 5 and 13 hereof to the contrary, the lands designated ‘B.388’ on Schedule ‘A’ hereto, the following regulations shall apply:

1. Shall have a total of 6 dwelling units;
2. Maximum Interior Side Yard Width of 2.50 metres;
3. Maximum lot coverage of 37.5%;
4. Minimum Amenity and Play Space Area of 467 square metres
5. Minimum driveway width of 2.5 metres; and
6. A single vehicle ingress and egress shall be permitted.
2. This By-Law shall come into force and take effect on its passing, provided no Notice of Appeal is filed to this By-Law, all in accordance with the provisions of Section 34, Subsections 19 and 30 of the Planning Act, R.S.O. 1990, c. P. 13; and where one or more appeals have been filed within the time period specified, at the conclusion of which, the provisions of Section 34, Subsections 19 and 30 of the Planning Act, R.S.O. 1990, c. P. 13 apply and the By-Law shall be deemed to have come into force and take effect on the day it was passed.

GIVEN ALL THREE READINGS AND PASSED month day, year

CITY CLERK

MAYOR