

**TO:** Mayor and Members of Council  
**FROM:** Storey Samways Planning Ltd.  
**DATE:** January 14, 2008  
**SUBJECT:** Planning Services Report

**GENERAL FILE INFORMATION AND KEY MAP:**

**Application:** Official Plan Amendment & Zoning By-Law Amendment for the Community of Dover (D-28 DO/98/07/G)

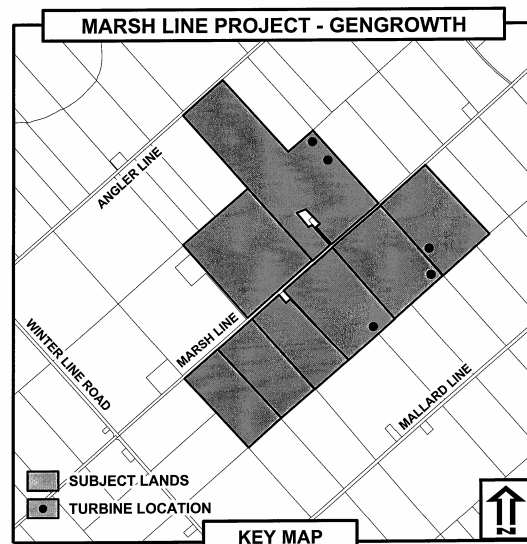
**Hansen#:** 4046

**Applicant:** Gengrowth LP1

**Location:** Please refer to Figure 1 attached and Key Map

**Roll Number:** Please refer to Table 1 attached

**Community:** Dover – North Kent



**RECOMMENDATIONS:**

It is recommended that:

1. Council approve official plan amendment application (D-28 DO/98/07/G) being OPA No. 27 in the Community of Dover which adds special policies to permit wind energy systems.
2. Council approve zoning amendment application (D-28 DO/98/07/G) to adopt the by-law to introduce the necessary definitions and regulations to permit wind turbines and associated uses on the subject parcels identified in Table 1 (attached).

## **DESCRIPTION OF PROPOSAL:**

Gengrowth LP1 proposes to construct five wind turbines on four parcels of land to fulfil a contract with the Ontario Power Authority under the Standard Offer Program to generate ten megawatts of electricity over a twenty year period. The project includes four additional parcels for contingency purposes. The proposed sites are contiguous farmed lots on both sides of the Marsh Line beginning approximately 575 metres east of the Winter Line in the Community of Dover. Please refer to Figure 1 and Table 1. Each turbine will consist of three blades with a rotation diameter of 82 metres attached to a nacelle mounted on an 80 metre high tower. Please refer to Figure 2. The Marsh Line project is one of four similar projects being submitted by Gengrowth for approval throughout Chatham-Kent. The electricity created at each turbine is converted to 27.6 kV by step down transformers. The turbines are interconnected via underground cabling with a connection point directly to a Hydro One utility pole located on Marsh Line.

The new official plan contains policies clearly supporting the establishment of wind farms such as that proposed by Gengrowth. However, as the new plan is not yet in force, and the existing official plan for Dover does not contemplate this type of land use, an amendment is required. In October of 2006 a similar process was followed when Council approved the 44 wind turbine project of Kruger Energy located in Romney, Tilbury East and Raleigh.

Other municipal Planning Act approvals necessary prior to the issuance of building permits are:

- zoning amendments to permit the proposed wind farm land use;
- consents for the long term leases exceeding the period allowed in the Planning Act;
- site plan and site plan agreements;
- removal of the “H”- Holding Symbol.

In addition Council will need to approve a road use agreement to cover road improvements necessary to accommodate delivery and site access of the turbines and the heavy equipment required for their erection. Finally, the project is subject to a number of approvals/permits under federal and provincial legislation, most importantly, the provisions of Ontario Regulation 116/01 made under the Ontario Environmental Assessment Act. This is discussed further under the **ANALYSIS** section of this report.

## **BACKGROUND:**

Table 1 provides the site information for each of the subject parcels. These are all farmed parcels, designated and zoned Agriculture.

## **CONSULTATION :**

The following agencies and parties were consulted prior to the drafting of this report:

- i) Technical Advisory Committee (TAC) – the project has been reviewed by TAC and supported. However, further significant input from TAC will be required during the Site Plan and “H” – Holding Symbol removal processes.
- ii) Green Energy Committee (GEC) – this committee comprised of representatives of Planning, Economic Development, PUC and Building has provided valuable input both from a strategic and technical perspective. The GEC supports the project.
- iii) Gengrowth – the proponent and its consultants have cooperated in providing all information requested on a timely basis.

*Comment – as noted elsewhere in this report, the Notice of Completion (NOC) for the Environmental Screening Report (ESR) had not been issued at the time of writing. The NOC is not issued until the province has completed its review and any concerns raised have been addressed in the final draft of the ESR. Based on discussions with the proponent and MOE, it was decided to proceed with the applications to Council due to scheduling pressures experienced by Gengrowth relating to turbine delivery. The expectation is that the NOC will be issued by February 4<sup>th</sup><sup>1</sup>.*

- iv) Ministry of the Environment (MOE) – several discussions were held with MOE representatives regarding the environmental assessment process and the review of the environmental noise assessment guidelines.
- v) Other consultants – informal discussions have been held with consultants advising on projects in Essex County.
- vi) Public Response

### **General**

As noted elsewhere in this report, wind energy projects over two megawatts are subject to a process known as the Environmental Screening Report (ESR) under the Environmental Assessment Act (EAA). A crucial required element of the ESR is public and stakeholder consultation. For the Marsh Line project, Gengrowth established and publicized a 1-877 number and special email address. As well, an Open House was held in Mitchells Bay on August 23, 2007, where 38 people attended. The ESR provides details on the public comments received from all

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<sup>1</sup>Please note that the preparation of the Environmental Screening Process involved a very widespread consultation process with Federal, Provincial and local government agencies.

consultation approaches as well as the proponent's response.

From a broader perspective, there have been many opportunities for any member of the public to become knowledgeable regarding the wind farm industry phenomenon in Ontario via the following means:

- The numerous Open Houses from other wind farm projects in Chatham-Kent conducted over the past year;
- Increased media coverage;
- Letters to the editor in the local newspapers;
- The internet.

The public response to wind farm projects, whether in Chatham-Kent or elsewhere, has been generally positive. People recognize and support the economic and environmental benefits. However, a number of issues have been raised in various forums which I describe and comment on below:

### **Specific Concerns**

1. Business Case – many people claim that wind energy does not in fact reduce dependence on fossil-fuel power generation because of its unreliability, and our scarce financial resources should be used more efficiently. A few energy experts have made this case.

*Comment – energy policy is a provincial responsibility, not a municipal one. It should be noted though that respected non-governmental organizations (NGO's) such as the Sierra Club, the David Suzuki Foundation and Greenpeace strongly support the expansion of wind power as key in reducing greenhouse gas emissions. In August of 2007, the Ontario Power Authority submitted its Integrated Power System Plan (IPSP) to the Ontario Energy Board. The date for the commencement of proceedings has not been announced yet. It is the IPSP which sets out the power procurement strategies and in particular the substantive and important role of wind power as a renewable energy source. It is this forum where objections to wind power in principle should be made.*

2. Noise emission – concerns have been raised regarding the nuisance effect and health impacts of wind turbine generated noise. Anecdotal instances are typically cited.

*Comment – undoubtedly there are people who have suffered nuisance impacts from previous projects, although the incidence of complaints in Ontario is very low according to the Ministry of the Environment. Wind farm*

*proponents refer to various accepted scientific studies which show little or no effect. There are well-developed standards for determining wind turbine noise emissions by the MOE which are regularly reviewed and updated. Each turbine must receive a Certificate of Approval under the Environmental Protection Act, and a monitoring protocol put in place to deal with complaints. As such, we rely on the Province to regulate this environmental impact. One of the conditions for removal of the "H"- Holding Symbol is the submission of the approved Certificate of Approval (COA) and the monitoring protocol plan. It should be noted that at the time of writing, MOE had not as yet completed its review of the noise study. We will report on its status at the February 11 Council meeting.*

3. Property Devaluation – it is claimed that wind farms will devalue neighbouring properties.

*Comment – as in any other mixed land use circumstance, when wind farm projects have been poorly planned and regulated, it is likely that some devaluation has occurred. However, the only studies I have seen, all submitted by proponents covering projects in the United States, the UK and Australia, demonstrate no negative impact in the medium to long term.*

4. Shadow flicker – shadow flicker occurs under a special set of conditions when the sun passes behind the hub of an operating wind turbine and the blade rotation causes a strobe effect. This can have a nuisance effect on neighbouring homes. Also, concerns regarding impact on epilepsy sufferers have been raised.

*Comment – there is no scientific evidence to support any claim for health impacts. With regard to nuisance effects, we request shadow flicker reports as part of the ESR process. They are then peer reviewed by a third party for conformance with the standards established at the Enbridge OMB Hearing in Kincardine in the spring of 2007. With regard to the Marsh Line project, the peer review had not as yet been completed at the time of writing but is expected by February 4<sup>th</sup>. We will report on its findings at that time.*

5. Bird population impact – concerns are generally expressed regarding the effect wind farms have on both breeding and migratory species, the latter more so where wind farms are located within or near known migratory routes, such as the proposed Marsh Line project.

*Comment – every ESR process includes avian studies conducted in accordance with guidelines prepared by Environment Canada – Canadian Wildlife Service. The guidelines address both the methods of assessment*

*and monitoring protocol. The guidelines create four categories of site sensitivity, with Category 4 being the highest. Administration requires that avian studies for those projects with potential Category 4 assessments, such as Marsh Line, be peer reviewed, even if the conclusion is that there will be insignificant effect. The peer review for Marsh Line had not yet been completed at the time of writing but is expected February 4th. We will report on its findings at that time.*

6. Visual impact – people have complained that the construction of wind turbines represents a visual intrusion on the rural landscape, spoiling or detracting from the view.

*Comment – this is a highly subjective matter and undoubtedly there are people who are strongly opposed to wind farm projects for this reason. Generally, turbines are not placed near the more obvious desirable viewshed along the lakeshores.*

7. Area compensation – people who live in the neighbourhood should be compensated for negative impact, not just those on whose land the turbine is located.

*Comment – this matter has been raised before but there is great difficulty in determining who is impacted (and by how much) and who is not. Ultimately, this is not under municipal jurisdiction.*

8. Wind theft – wind theft arises where a neighbour of a parcel where a wind turbine is located cannot build his or her own turbine due to the proximity of the existing one. In effect, that landowner is being denied a right to harvest the wind resource that is being afforded to others.

*Comment – while there may or may not be merit to this concern, this is a legal issue, as opposed to a land use planning one, and not within municipal jurisdiction.*

9. Zoning By-law setbacks are inadequate – concerns have been raised that the setback in the draft Chatham-Kent zoning, and already in place in the former Townships of Romney, Tilbury East and Raleigh provide insufficient distance separation from lot lines, nearby residences and public roads in the event of a turbine collapse.

*Comment – the standards used in the Chatham-Kent by-law are based on those used in other jurisdictions in Ontario, in particular those used in the Erie Shores project in Bayham and Norfolk. The standard suggested by opponents from lot lines, 1.25 x the height of the turbine (122 metres for the Marsh Line project), results in a minimum lot frontage of around 335 metres*

*(1100 feet). This has two consequences. First, many farm parcels otherwise viable for turbine location in Chatham-Kent would be eliminated. Second, forcing turbines into the middle of the lot would further disrupt farming practices and increase the footprint on the land. The probability that turbines will fall; will topple rather than collapse downwards; topple onto a neighbouring property rather than on the subject leased lands; and cause significant damage is very remote. With regard to setbacks from nearby residences, it should be noted that the Certificate of Approval required under the Environmental Protection Act mandates setbacks to ensure no adverse effects due to noise emissions. Typically these are a minimum of 400 metres. In the Marsh Line project, the shortest distance between a receptor (dwelling) and a turbine is 463 metres, well in excess of the 300 found in the zoning by-law.*

10. Inadequate circulation area – complaints have been made that due to the height of the turbines and the potential distance of their off-site impacts, the normal mailing circulation area requirements of 120 metres (400 feet) required in the Planning Act is inadequate.

*Comment – I agree. We have expanded the circulation area to 500 metres (1640 feet) for the four Gengrowth projects. Also each site being considered for rezoning is posted and the notice has also been put into “C-K Matters” for circulation by newspaper throughout Chatham-Kent. This occurs for all four projects in addition to the public consultation process conducted by Gengrowth under the Environmental Assessment Act.*

11. Stray Voltage – stray voltage has been raised as a concern by several people at the local open houses and in letters to the Mayor and Council.

*Comment: this is an issue addressed by the proponent in the ESR. Stray voltage is a direct result of poor grounding practices, and improper or inadequate wiring on the customer’s side of the utility meter. This results in electricity seeking an alternative path back to the utility’s electrical grid. The addition of a wind turbine neither creates nor solves on-site stray voltage problems. It is important to note that all electrical infrastructure used in the Gengrowth projects will be “state of the art” and subject to approval by the relevant authorities.*

## **ANALYSIS:**

### *Community Strategic Plan*

The recommendations in this report support the following objectives and strategic goals:

B. Economy – We are a prosperous community.

B2 Make Chatham-Kent a business-friendly community and a desirable leisure destination.

B4 Encourage the continued growth of a diversified and sustainable economic base.

Desired Outcomes/Proposed Activities

- Increase the diversity of area investments, entrepreneurs and skilled workforce.
- Increase existing business certainty and attract new business to Chatham-Kent.
- Identify Chatham-Kent as a location for new investment.

C. Environment – We are a green community.

C1 Develop pride in the community for its environmental assets.

C4 Promote responsible consumption of non-renewable resources.

Surprisingly there are no Desired Outcomes/Proposed Activities related specifically to green energy and the reduction of greenhouse gas emissions.

The recommendations will not adversely impact the remainder of the Community Strategic Plan.

*Provincial Policy Statement*

There are 2 subsections under Section 1.8 Energy and Air Quality which apply:

- 1.8.2 Increased energy supply should be promoted by providing opportunities for energy generation facilities to accommodate current and projected needs, and the use of renewable energy systems and alternative energy systems, where feasible.
- 1.8.3 Alternative energy systems and renewable energy systems shall be permitted in settlement areas, rural areas and prime agricultural areas in accordance with provincial and federal requirements. In rural areas and prime agricultural areas, these systems should be designed and constructed to minimize impacts on agricultural operations.

Clearly, the proposed wind farm implements an important provincial initiative regarding renewable energy systems. The environmental assessment, combined with the site plan review process, will ensure that any impacts on agricultural operations will be minimized as required by Section 1.8.3.

### *Official Plan*

The official plan in effect is that of the former Township of Dover which was prepared in an era when wind farms were not a use found or contemplated in rural areas. However, the new official plan adopted by Council in January 2005, but not yet approved by the Minister of Municipal Affairs and Housing, establishes wind farms as a permitted use in any designation, and provides policies to guide their development. Highlights are:

- i) Wind farms can only be implemented through an amendment to the zoning by-law.

*Comment – the proponent has made application to rezone the subject properties.*

- ii) Access must be provided to public roads capable of supporting construction and maintenance vehicles.

*Comment – access to the sites will be from Marsh Line. Any improvement required to the road or access to accommodate entry will be determined in the road agreement and site plan agreement processes.*

- iii) There must be appropriate setbacks from sensitive land uses such as residential or institutional.

*Comment – Setbacks are discussed under Zoning By-law below.*

- iv) Policy 2.5.2.7 requires “appropriate studies” be undertaken to cover a number of matters. It should be noted that these are all concerns addressed in the Environmental Screening Report (ESR). Generally, we rely on the studies in the ESR to satisfy this official plan policy. In some instances, which are noted below, we have required a peer review of these studies. It should be noted that at the time of writing, neither the final version of the ESR which addresses the comments of the Province, or the peer review reports have been received, although both are expected prior to the Council meeting. The special study requirements in the referenced official plan policy covers the following topics:

- Noise Impact – *Comment: a noise impact study has been completed and submitted. Turbine location must meet the standards set by the Ministry of the Environment under the Environmental Protection Act. As discussed below, the “H” – Holding Symbol will be applied and not removed until the Certificates of Approval (C. of A’s) have been submitted.*
- Visual Impact (Shadow Flicker) – *Comment: as noted earlier, a shadow flicker study has been completed. This is one area where peer review has*

*been required.*

- Visual Impact (viewshed) – Comment: *impact on what is known as the “viewshed” has been reviewed as part of the environmental assessment. However, this is a subjective issue – some people find turbines aesthetically pleasing and some do not. There are no particular mitigating measures for those who do find turbines displeasing except for refusing to permit them in the first place. In the Kruger application, the turbines were placed far from the lakeshore so as not to disturb Lake Erie vistas. The Marsh Line turbines are a considerable distance from the Lake St. Clair shoreline and should not disturb that vista.*
  - Natural Heritage Features – Comment: *all known natural hazards and features have been identified after consultation with the appropriate agency and the turbines located accordingly.*
  - Airport / Telecommunications – Comment: *these items were identified and accounted for in the ESR, after consultation with affected agencies and parties.*
  - Impact on Agriculture – Comment: *the turbines and access roads have been designed to minimize the turbine “footprint” and disruption to normal farm practices.*
  - Impact on Birds – Comment: *although a study on this topic is not a requirement of the official plan, it forms an important part of the ESR. Given the potential for impact on bird population, particularly migratory species, we have required a peer review of the study be submitted with the final draft of the ESR.*
- v) A policy added as part of the amendment associated with the Kruger project required that a proponent for a new wind turbine must demonstrate that there will be no impact on the operational efficiency of an existing turbine, or one approved but not constructed.

Comment: *there are no existing or previously approved turbines in the vicinity of the Marsh Line project.*

### *Zoning By-law*

The implementing zoning by-law attaches the suffix “WF” to the existing zoning on the subject parcels, adding wind farms authorized under an environmental assessment process (and accessory uses) to those uses, mainly agricultural, already permitted. The

regulations, which are based on those used in other jurisdictions, do the following:

- require a minimum setback of the rotor length plus 10 m from any lot line, (51 m in this case), except where the neighbouring property is under lease to the wind farm developer where no setback is required;
- require a special setback from residential, institutional, industrial and commercial zones (600m) unless otherwise noted;
- require a special setback of 300 metres from off-site dwellings in rural residential zones;
- require a special setback of 250 metres from on-site dwellings;
- specify a minimum lot size (10 ha or 25 acres) and lot frontage (50 m or 164 ft).

These standards have already been approved by Council in the Romney, Tilbury East and Raleigh zoning by-laws to accommodate the Kruger project.

#### *Use of “H” – Holding Symbol*

Based on the municipal experience with Kruger, and that in other jurisdictions, it is recommended that the “H” – Holding Symbol be applied to the zoning category until the submission of various documents. This will permit the underlying zoning to proceed at this time with more certainty, and provide Council with the ultimate assurance that all items subject to negotiation with the Municipality and as identified in the ESR have been addressed. For the purposes of the Marsh Line project these documents include:

- site plan agreement;
- decommissioning plan;
- dispute resolution protocol;
- operational management plan;
- construction management plan;
- road maintenance agreement;
- emergency response plan;
- certificate of approval for noise emissions;
- post-construction avian monitoring protocol;

- noise complaint monitoring protocol.

### *Site Plan*

Site Plan Control under Section 41 of the Planning Act will be used to regulate development on a site-by-site basis. Generally it is anticipated that drainage and access routes will be the principal items addressed in the plan and in the agreement. However, it may also be necessary to deal with other issues as the occasion arises, such as protection of natural heritage features.

It is proposed that the Technical Advisory Committee will review each site in detail and Administration will approve the site plan application, subject to any necessary revisions. The Mayor and Clerk will then sign the agreement which will be registered on title. This approach which results in a streamlined yet comprehensive process, was used successfully in the Kruger project. The routine approval by-law was amended as part of Kruger project approvals to accommodate this approach, delegating site plan approval authority for wind farm projects to Administration.

### *Environmental Assessment*

The Gengrowth project is subject to Ontario Regulation 116/01 under the Environmental Assessment Act. This is a special regulation applying to electricity projects. Wind turbines which are designed to generate 2 megawatts or greater are considered Category B type projects and are subject to an Environmental Screening Process (ESP). ESP's are proponent driven, self-assessment processes unlike the full environmental assessments required for Category C electricity projects. However, like any other environmental assessment process, the proponent (i.e., Gengrowth) must ensure that the ESP satisfies 2 basic requirements:

1. The design and management of a timely and comprehensive public consultation process;
2. Assurance that the project will:
  - have no negative environmental effects, or
  - satisfactorily mitigate any negative environmental effect.

Negative environmental effects are defined as follows:

*Negative environmental effects include the negative effects that a project has, or could potentially have, directly or indirectly on the environment at any stage in the*

*project life cycle. Negative environmental effects may include, but are not limited to, the harmful alteration, disruption, destruction, or loss of natural features, flora or fauna and their habitat, ecological functions, natural resources, air or water quality, and cultural or heritage resources. Negative environmental effects may also include displacement, impairment, conflict or interference with existing land uses, approved land use plans, businesses or economic enterprises, recreational uses or activities, cultural pursuits, social conditions or economic structure.*

One significant change in process resulting from the Kruger project was the requirement henceforth that no rezoning applications would be brought before Council until the comments from the province and the municipality regarding the Environmental Screening Report had been addressed and the Notice of Completion issued. As Council may recall rezoning for the Kruger project occurred before submission of the ESR. This new approach was made plain in a memo dated September 4, 2007 from our office to all proponents of record.

Gengrowth submitted drafts of the Environmental Screening Reports for all four of their projects, including Marsh Line, on October 5<sup>th</sup>, 2007. We reviewed these documents in accordance with an Environmental Assessment Checklist we developed with assistance from the Planning Department and the Green Energy Committee. The Checklist is included as Figure 3, and our response to Gengrowth is included as Figure 4. Gengrowth addressed most of the issues in a submission dated October 31, 2007. At the time of writing, those matters related to the ESR still outstanding are as follows:

- peer review of the avian study;
- peer review of the shadow flicker report;
- satisfactory response to the provincial comments and issuance of the Notice of Completion.

As noted earlier, completion of these items is expected by February 4<sup>th</sup>.

Once the Notice of Completion is published there is a 30-day public review period of the final Environmental Screening Reports. Should there be no objections or requests for elevation (“bump up”) to a full environmental assessment, then the proponent will issue the Statement of Completion and the project will be ready to proceed. If there are requests, the MOE Director has several options:

1. Deny the request for elevation;
2. Deny the request for elevation with conditions;
3. Refer the matter to mediation before making a decision;

4. Require the proponent to conduct further study before making a decision;
5. Require the proponent to conduct an Environmental Review; or
6. Recommend to the Minister of the Environment that the project be elevated to an individual EA.

Municipal reaction to the Notice of Completion should be based on the outcome of the provincial assessment of the ESR and the peer reviews. Provided they are satisfactory, I would recommend that Chatham-Kent not respond to the NOC.

### *Conclusion*

As noted below, the Gengrowth wind farm project will provide economic development benefits to the Municipality and the Community at large. However, more importantly, this application provides an opportunity for the Municipality to materially affect a very serious environmental issue – global warming – as caused by man-made carbon dioxide emissions. The establishment of a renewable source of energy will result in reduced dependence on coal-fired electrical generation, a method recognized as the greatest producer of CO<sub>2</sub>, and an important component of senior government environmental policy.

Based on the foregoing, I support the application.

### **FINANCIAL IMPLICATIONS:**

Based on the estimate of the proponent and experience of other projects in Ontario, there are a number of financial benefits:

- Local permanent jobs – these are estimated at 10 persons per 100 MW. This would amount 1 each for the Gengrowth projects or 4 in total.
- Construction jobs – these are calculated to be about 4000 man-hours per turbine or about 40 person years for the 4 projects.
- Total developer investment is about \$2.4 million per megawatt or about \$96 million for the Gengrowth projects.
- Local construction materials – the value of local materials purchased for construction is about \$90,000 per turbine or \$1.8 million.
- Landowner compensation is estimated at \$10,000 per turbine per year, or \$200,000.
- Property tax is estimated at \$2400 per megawatt, or about \$96,000 for the Gengrowth projects.

Any public works associated with road and other infrastructure improvements necessary to

accommodate this project can be addressed through the municipal permitting/approval process and will be done at no expense to Chatham-Kent.

Prepared by:

Reviewed by:

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Thomas A. Storey, M.Sc., MCIP, RPP  
Storey Samways Planning Ltd.

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Ralph Pugliese, MCIP, RPP, DPA  
Director, Planning Services

Reviewed by:

Reviewed by:

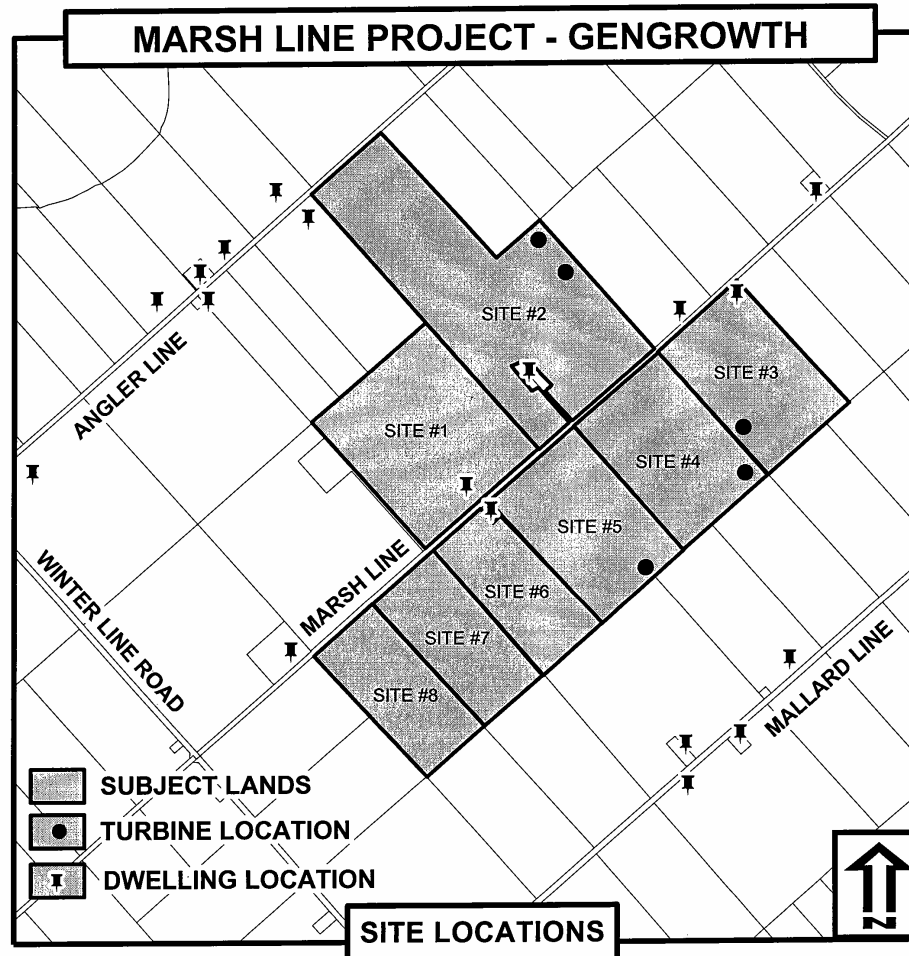
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Evelyn Bish, B.A.  
Acting General Manager  
Community & Development Services

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Gerry Wolting, B. Math, CA  
Acting Chief Administrative Officer

**FIGURE 1 – SITE AND TURBINE LOCATIONS**



**TABLE 1 – SITE INFORMATION**

**TABLE 1 - GENGROWTH LP1 - MARSH LINE WIND FARM**

SITE NO.	LAST NAME	FIRST NAME	SUBJECT ADDRESS	LOT & PLAN INFO	ROLL #	AREA (ACRES)
1	Demers	Raymond	7455 Marsh Line	PT. LOT 15, CONCESSION 11	365048000802800	99.54
2	Clay-Len Acres Ltd.		7580 Angler Line	PT. LOT 16, CONCESSION 11	365048000714900 & 365048000710300	157
3	Brown	Dennis	7694 Marsh Line	PT. LOT 17, CONCESSION 10	365048000706100	69.75
4	Martin	Pierre/Linda/Gabriel	7606 Marsh Line	PT. LOT 16, CONCESSION 10	365048000705900	74.61
5	Couture	Jerry/Marcia	7522 Marsh Line	PT. LOTS 15 & 16, CONCESSION 10	365048000705800 & 365048000801100	98.39
6	Crow	Clayton/Mary	Marsh Line	PT. LOT 15, CONCESSION 10	365048000801110	50.16
7	Bishop Farms Ltd.		7348 Marsh Line	PT. LOT 14, CONCESSION 10	365048000801000	50
8	Demers	Raymond	7322 Marsh Line	PT. LOT 14, CONCESSION 10	365048000800900	50

**Figure 2: Example of Proposed “Enercon E-82” Wind Turbine**



### **Figure 3: MUNICIPAL CHECKLIST FOR WIND ENERGY ENVIRONMENTAL ASSESSMENT STUDIES**

The following topics are of particular interest to the Municipality of Chatham-Kent and should be addressed satisfactorily in any study, such as an Environmental Screening Report (ESR) required under the Environmental Assessment Act, in order for the Municipality to sign off on such study.

1. Avian Impact Assessment - birds, bats, butterflies.
2. Noise Emissions – the Municipality will require submission of the Certificate of Approval required under the Environmental Protection Act prior to the removal of the “H, Holding Symbol”. Also the protocol for a monitoring program should be included.
3. Grid connection circumstances.
4. Operational Management Plan – submission required as a condition of removal of the “H, Holding Symbol”.
5. Construction Management Plan - submission required as a condition of removal of the “H, Holding Symbol”.
6. Decommissioning Plan - submission required as a condition of removal of the “H, Holding Symbol”.
7. Emergency Response Plan - submission required as a condition of removal of the “H, Holding Symbol”.
8. Property Value Impact Assessment.
9. Visual Impact Assessment – this will include identification of heritage landscapes; storage restrictions; overhead cabling location; visual montage (including cabling effect); and shadow flicker analysis.
10. Public Consultation Process – this will include full disclosure of all comments and responses provided.
11. Economic Impact.
12. Ice throw (and any other safety concerns).
13. Impact of development rights on neighbouring properties.
14. Electromagnetic Interference (EMI)

**FIGURE 4: RESPONSE TO GENGROWTH RE: DRAFT ESR**



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330 RICHMOND ST., SUITE #204, CHATHAM, ONTARIO N7M 1P7  
TELEPHONE (519) 354-4351 E-MAIL [sspl@ciaccess.com](mailto:sspl@ciaccess.com)  
FAX (519) 354-4298

Memorandum

**DATE:** October 24, 2007

**TO:** Ralph Pugliese  
**Cc:** Marsha Coyne

**FROM:** Tom Storey, Storey Samways Planning Ltd.

**RE:** Draft Environmental Screening Report – Bisnett Line, Marsh Line, Swanton Line and Front Line Wind Farms, Gengrowth Renewables Inc.

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**A. OVERVIEW**

The four above ESR's were submitted together on October 5<sup>th</sup>. My review used the following approach:

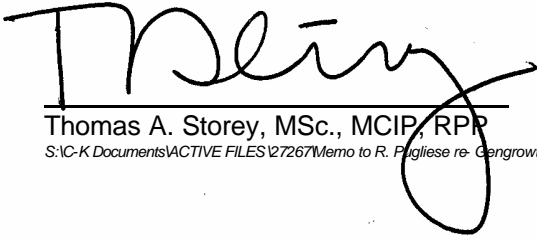
1. Have the following general requirements been met?
  - a) Have best practises been used in the study?
  - b) Is the information technically correct?
  - c) Have the standards been identified and justified (where necessary)?
  - d) Have references been provided?
  - e) Have issues raised in the public consultation been addressed?
  - f) Is the report comprehensive, i.e., have all sub-topics been covered?
2. I have compared the content of the ESR's with EA checklists provided to you on October 4<sup>th</sup>.
3. I have compared the ESR's with each other, and with other ESR's received by Chatham-Kent.

## **B. ANALYSIS**

Based on the above, I have the following comments. Please note that, unless noted otherwise, my comments apply to all four of the ESR's.

1. The reports are comprehensive and thorough. However, there are the typical errors found in a first draft which should be cleaned up. In particular there are maps and text which are provided in one ESR, which clearly belong in another. Also, many figures are not numbered or identified.
2. The first figure displaying the location of the turbines relative to nearby buildings needs to clearly distinguish buildings, i.e., barns and sheds, from dwellings.
3. The schedule notes that all local permitting processes should be started by December 31, 2007, and completed by April 18, 2008. Does this include all Planning Act approvals, building permits, etc.?
4. The impact on rural wireless high-speed internet systems needs to be assessed. Have Chatham Internet Access (AirNet) or TekSavvy Solutions Inc. (XploreNet) been informed of the project?
5. The bat impact analysis is incomplete.
6. There is no assessment of the impact on butterflies.
7. A summary of the economic impacts on the community would be of assistance.
8. An analysis of turbine location on the development rights of vacant neighbouring properties needs to be conducted.
9. Remote monitoring of the project by SCADA is critical to the operation of the wind farm. What is the back-up system in the event that SCADA fails?
10. The photo montage used for displaying the views hed should note the viewpoint and direction of the viewshed. It should also show any overhead cabling requirement.
11. The shadow flicker analysis should be peer reviewed. In particular we need to establish consistent standards to be applied to all ESR's we receive.
12. There is an impact on a heritage landscape not addressed in the Bisnett Line project. Views of the lake from south facing dwellings to the north of the project could be impaired.
13. Bird Studies for the Marsh Line, Bisnett Line and Front Line ESR's should be peer reviewed.
14. I can not find any reference to a noise emission monitoring program or protocol. As I have noted before, it may be worthwhile for C-K to take the lead on this, co-ordinating it with other proposed wind farm projects.

These are my comments. Please call if you have any questions.



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