



**OPEL TECHNOLOGIES INC.**

(formerly OPEL Solar International Inc.)

**ANNUAL INFORMATION FORM**

**For the Year Ended December 31, 2010**

**November 30, 2011**

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## INFORMATION INCORPORATED BY REFERENCE

Certain of the information contained in this Annual Information Form ("AIF") may be found in other documents filed by us with Canadian securities regulators, including our 2010 Management's Discussion & Analysis ("MD&A") and our 2010 Audited Annual Financial Statements, which documents were filed on SEDAR and which can be publicly accessed at [www.sedar.com](http://www.sedar.com). See also the section in this AIF entitled "*Additional Information*".

Unless otherwise noted, the information contained in this AIF is given as at December 31, 2010. Unless otherwise noted or the context otherwise indicates, the "Company", "we", "us", "our" and "our company" refers to OPEL Technologies Inc. ("OPEL") and its direct and indirect subsidiaries. Our direct subsidiary, OPEL Solar Inc., Inc., shall be referred to herein as "OPEL Solar". Unless otherwise indicated, all dollar amounts in this AIF are expressed in U.S. dollars. References to "\$", "USD" or "US\$" are to U.S. dollars and references to "CAD" or "CA\$" are to Canadian dollars. Disclosure of information in this report has been limited to that which management has determined to be "material", on the basis that omitting or misstating such information would influence or change a reasonable investor's decision to purchase, hold or dispose of securities in the Company.

## FORWARD-LOOKING STATEMENTS

This document contains statements which constitute forward-looking statements. These forward-looking statements are not descriptive of historical matters and may refer to management's expectations or plans. These statements include, but are not limited to, statements concerning: our business objectives and plans including our corporate strategy and strategic priorities; our future financial performance and prospects including revenues, expenses, gross margins and earnings; future industry trends, our expectations for sales of our products including anticipated costs, sales, size, duration, growth or decline of market opportunities and competitive and pricing pressures; our product development roadmap and the speed at which we are able to introduce new products; the adoption of new standards in the markets in which we compete and our ability to anticipate these changes and successfully address new opportunities; sales and capital spending plans and estimates, shipment levels and operating expenses; exchange rate fluctuations in, and the relative values of, the Canadian dollar, the U.S. dollar and other currencies; our ability to finance our growth plans and make necessary investments.

Inherent in forward-looking statements are risks and uncertainties beyond our ability to predict or control, including, but not limited to, risks associated with: competitive and pricing pressures in the increasingly competitive environment in which we operate; economic cycles and downturns which can result from adverse general economic conditions; our ability to anticipate needs for future products and successfully execute our product roadmap, including the possibility of the emergence of disruptive technologies which negatively impact our positioning in the marketplace; fluctuations in foreign exchange rates and the potential adverse impact upon our financial results; our reliance on external suppliers and the potential adverse effects of disruptions in any of these arrangements; the successful integration of acquisitions; our ability to attract and retain key personnel necessary for our business; our ability to successfully protect our intellectual property rights; and the initiation and outcome of legal proceedings. Readers should also refer to the section "*Risk Factors*" in this document and the section entitled "*Financial Instruments and Risk Management*" contained in our 2010 MD&A.

Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this document and other public documents. Such statements are based on a number of assumptions which may prove to be incorrect including, but not limited to, the following assumptions: there is no sustained material deterioration in the business and economic conditions in the marketplace for our products; our expectations regarding market trends are not materially incorrect; we are able to execute our product roadmap without delays or disruptions having a material impact on us; our expectations relating to the needs and direction of the marketplace for our products are reasonably accurate and we are able to introduce products and capitalize on new opportunities generally as expected; material disruptions in the manufacture and supply of products and services to us by suppliers will not occur; our expectations relating to competitive pressures, including pricing pressures, are not materially incorrect; significant fluctuations in foreign exchange rates which

materially adversely affect our financial results do not arise; customer demand for our products remains generally as anticipated; we are able to successfully integrate acquisitions; and we are able to continue to retain and attract technical and other key employees.

Readers are cautioned that the foregoing list of important factors and assumptions is not exhaustive. Forward looking statements are not guarantees of future performance. Events or circumstances could cause our actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. Consequently, readers should not place any undue reliance on these forward-looking statements. Forward-looking statements are provided for the purpose of providing information about management's current expectations and plans relating to the future. Readers are cautioned that such information may not be appropriate for other purposes. In addition, these forward-looking statements relate to the date on which they are made. We disclaim any intention or obligation to update or revise any forward-looking statements or the foregoing risks or uncertainties or assumptions, whether as a result of new information, future events or otherwise, except to the extent required by law.

### TECHNICAL TERMS AND ABBREVIATIONS

ASP	Average selling price
CE	Qualification standard required in Europe for electric equipment and electronic components
CPV	Concentrating photovoltaic
HCPV	High concentrating photovoltaic
IP	Intellectual Property
kW	Kilowatt
kWh	Kilowatt-hour
Mk-1	HCPV panel manufactured by the Company
Mk-1X	Prototype version of the HCPV panel manufactured by the Company
MW	Megawatt (1000 kW)
POET	Planar Opto-Electronic Technology
SBIR	Small Business Innovation Research Contract with US Government
SF-20	A dual-axis tracker manufactured by the Company
SF-45	European version of the TF-500
TF-500	The largest dual-axis tracker manufactured by the Company
TF-800	The largest single-axis tracker manufactured by the Company
TSXV	The TSX Venture Exchange
UL	Safety standard required in USA for electric equipment and electronic components
TUV	Worldwide qualification standard required in certain countries under certain applications

### CORPORATE STRUCTURE

#### Name, Address and Incorporation

OPEL International Inc. is a reporting issuer in each of the provinces of Ontario, Alberta, British Columbia and Quebec with the following offices:

**Registered and Head Office:** Suite 501, 121 Richmond Street West, Toronto, Ontario M5H 2K1; and

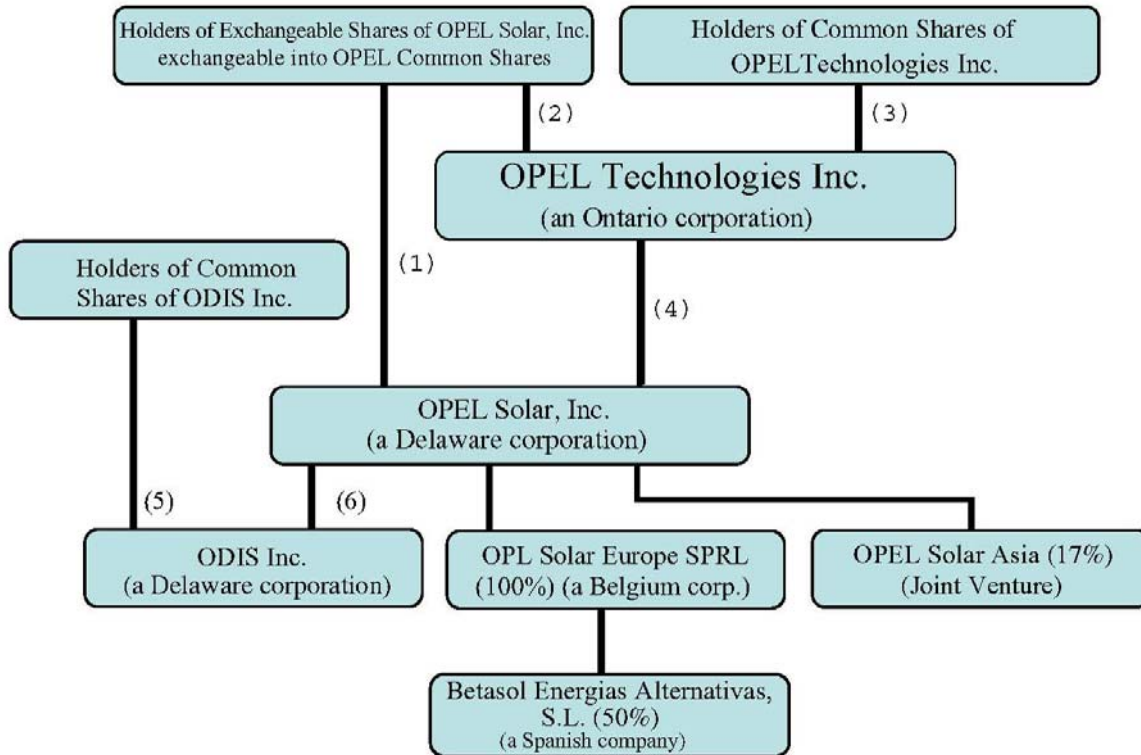
**Operations Office:** Suite 204, 3 Corporate Drive, Shelton, Connecticut, U.S.A. 06484.

OPEL was originally incorporated under the Company Act (British Columbia) on February 9, 1972 as Tandem Resources Ltd. ("Tandem"). On November 14, 1985, Tandem amalgamated with Stanmar Resources Ltd. and Keezic Resources Ltd., to continue as one company under the name Tandem Resources Ltd. under the Company Act (British Columbia). By Articles of Continuance dated January 3, 1997, Tandem was continued under the Business Corporations Act (Ontario). By Articles of Amendment dated September 26, 2006, Tandem changed its name to OPEL International Inc. By Certificate of

Continuance dated January 30, 2007, OPEL International Inc. was continued under the New Brunswick Business Corporations Act. By Articles of Continuance dated November 30, 2010, OPEL International Inc. was continued under the Business Corporations Act (Ontario) and changed its name to OPEL Solar International Inc. By Articles of Amendment dated August 25, 2011, OPEL Solar International Inc. changed its name to OPEL Technologies Inc.

### **Intercorporate Relationships**

At December 31, 2010, our principal direct subsidiary is OPEL, Inc. (a Delaware corporation). On October 28th, 2011, OPEL, Inc. changed its name to OPEL Solar, Inc. and is hereinafter referred to as "OPEL Solar". The chart below sets out our direct and indirect operating subsidiaries and the location of their jurisdiction of incorporation.



#### Notes:

- (1) As at December 31, 2010 and November 30, 2011, there were respectively 1,358,000 and 135,500 Exchangeable Shares of OPEL, Inc. issued and outstanding. They are exchangeable into Common Shares of OPEL on a one-for-one basis.
- (2) There is one (1) Special Voting Share held pursuant to a Voting Trust Agreement entitling the holders of Exchangeable Shares a number of votes equal to the number of Exchangeable Shares outstanding from time to time.
- (3) As at December 31, 2010 and November 30, 2011, there were respectively 85,292,514 and 93,025,421 Common Shares of OPEL issued and outstanding.
- (4) As at December 31, 2010 and November 30, 2011, there were 28,374,066 Class A Common Shares of OPEL, Inc. issued and outstanding, all of which are held by OPEL. There are no other outstanding securities of OPEL, Inc. other than the Exchangeable shares and the Class A common Shares.
- (5) As at December 31, 2010 and November 30, 2011, there were 5,500 Common Shares of ODIS Inc. issued and outstanding and representing 55% of the total Voting Securities, which are held by US citizens, who are Insiders of the Company and who are bound by a shareholders' agreement which restricts their ability to transfer the shares.
- (6) As at December 31, 2010 and November 30, 2011, there were 4,500 Preferred Shares of ODIS Inc. issued and outstanding and representing 45% of the total Voting Securities, which are held by OPEL, Inc. The Preferred Shares carry virtually 100% of the economic interest. There are no other outstanding securities of ODIS Inc. other than the Common Shares and the Preferred Shares.

## GENERAL DEVELOPMENT OF THE BUSINESS

### **Three Year History**

OPEL Technologies Inc. is a corporation continued under the laws of the Province of Ontario. Our Operations Office is located in Shelton, Connecticut. We employ globally approximately 28 individuals.

We are engaged principally in the development and marketing of concentrating solar panels, single and dual axis solar tracking systems for commercial applications, and the development of a gallium arsenide microchip for numerous applications, including solar cells. The Company operates the following two distinct reportable segments (*for more information refer to "Description of the Business" on page 9*):

- (a) Through our subsidiary, OPEL Solar, we design, manufacture and market HCPV panels to transform solar energy into electricity for worldwide application. We also manufacture and market a complete line of single and dual axis solar trackers which can be used to mount all types of solar panels, (silicon, thin film, and HCPV) in ground mounted arrays or roof mounted systems. OPEL Solar has transitioned from a development stage company but have not completed many large revenue producing installations to date. In 2009, OPEL Solar made two significant installations to demonstrate our capability to deliver on commercial installations of both trackers and HCPV panels. One installation proves our rooftop tracking systems can increase the kWh production and the second, in Spain, demonstrates the viability of our HCPV panels and dual axis trackers for a utility scale installation. In 2010 OPEL made several strategic sales of its dual axis trackers and HCPV panels in the US and Canada as well as one in China, targeted at potential volume users.
- (b) In addition, through ODIS Inc. (hereinafter referred to as "ODIS"), we design infrared sensor type products for military and industrial applications. ODIS continues to develop gallium arsenide-based processes and semiconductor microchip products having several potential major market applications: infrared sensor arrays for Homeland Security monitoring and imaging along with the unique combination of optical lasers, and electronic control circuits on the same microchip for potential applications in various military programs and telecom applications. ODIS has been awarded several US Department of Defense SBIR contracts since 2000 which have been supporting our POET process development, infrared sensing technology, optical/laser development and the combination of electronic circuits and lasers on the same microchip. ODIS continues to be active in this area with several recent projects underway with the US Department of Defense and two major US defense contractors.

### **Milestones**

We achieved certain milestones in 2008, 2009 and 2010 which are significant to our development and are considered necessary foundation achievements for our future growth and success.

#### **2008:**

1. We continued with the discovery and preparation for patent filings for the POET Process and solar technologies.
2. We hired a Vice President of Engineering in February 2008 to lead the research and development efforts and the migration of our concentrating solar panels to volume manufacturing.
3. We entered into a long-term supply contract with Boeing-Spectrolab, for volume supply of its triple junction high efficiency solar cells.
4. We shipped the first trial installations of our HCPV systems to Energy 21 in the Czech Republic, for the first operational installation of such systems in Central Europe, and to SunPeak Solar in California. These trial installations proved to be successful.
5. We signed a distribution agreement with Solarfun Power Holding for the sale of its solar panels in North America and Brazil. This agreement is no longer in effect.
6. We won the contract to provide power to a Connecticut school based on the use of our patented low profile roof top tracking system. Installation started in the third quarter of 2008 and was completed in March 2009.

7. We won a contract to install our patented Mk-I concentrating solar panels and dual axis trackers for the City of Medicine Hat, Alberta. Installation started in the fourth quarter of 2008 and was completed in 2009.
8. We successfully transferred the design specifications of our patented Mk-I concentrating solar panel to a contract manufacturer in Mexico. That manufacturer started running production quantities for delivery in the third and fourth quarters of 2008. Production ceased in the first quarter of 2010.
9. We booked an order for a 10kW installation in South Korea for our Mk-I concentrating solar panels. This was the initial phase of grid field deployment which was expected to lead to 10MW in future deployments. However no further deployments lead from this installation.
10. We and our partners formed Alcapí Solartwent Management (ASM), which applied for and was granted a permit from the Spanish Government, as well as the local utility, to build a solar grid field of 712kW. The grid was never built and ASM was later dissolved.
11. We commissioned a 10kW solar system, utilizing our concentrating solar panels and SF-20 trackers, to provide power to a commercial building in a neighboring town in Connecticut.
12. We shipped SF-20 trackers and Mk-I concentrating solar panels to a Spanish integrator in Q3 2008.
13. We obtained CE qualification for our Mk-I concentrating solar panel under IEC 62108 standards (the CE code applicable to HCPV products). This CE compliance is required to sell products into the European market as well as other markets using these standards.
14. We formed a Belgium-based subsidiary, OPL Solar Europe SPRL, to better address solar opportunities in Europe. Any future partnerships for grid field installations will work with us through this entity.
15. Manufacturing for our largest dual axis solar tracking system, the TF-500, was successfully brought on line in the US and 80 trackers were delivered to grid field installations in California. This move lowered our manufacturing and shipping costs and reduced time for US installations.
16. We booked a 440kW order for HCPV panels from a Spanish integrator, Fuerza Solar S.L. (“Fuerza”), and began shipping product late in December 2008. It was anticipated that once installed and commissioned, the grid field will be sold to a third party who will sell the electricity produced. See item 18, 29 and 32 for more details.
17. We delivered 4kW in HCPV panels and trackers to a customer in Italy in December 2008.

**2009:**

18. Through OPL Solar Europe (“OSE”), we entered into a 50-50 partnership with Fuerza forming Betasol Energias Alternativas, S.L. (the “Betasol Partnership”). The Betasol Partnership was installing a 440kW solar grid field in Spain. In 2009, we delivered 363kW of panels to this project representing approximately \$1M in revenue that will be recognized once this grid field is sold to a third party. A 330kW portion of this installation was already producing power to the grid at the end of 2009, and potential customers are being hosted at the site. The Spanish government is due to announce the approved feed-in tariff for this installation in 2010, which will allow a customer the ability to bill for power at that rate for the next 25 years. It was anticipated that commencement of the fourth and final section of this 440kW installation would await customer funding, however the 4th section of the field was subsequently sold undeveloped. See item 29 and 32 for more details.
19. On March 20, 2009, we completed Connecticut’s first rooftop solar tracker system. The 131kW solar system was installed on the Linden Street School in Plainville, CT and is supplying a significant portion of the school’s electricity. The system will also eliminate 79 tons of carbon emissions over the next 20 years. We retain ownership of this \$1.1M system and will receive payment for the electricity generated from this installation through a power purchase agreement (“PPA”) with the Plainville School System over the next twenty years. We received a cash reimbursement of \$526,500 from the Connecticut Clean Energy Fund. As a part of the new American Recovery & Reinvestment Act (“the Stimulus Package”), we received an additional cash payment, in lieu of a tax credit, from the U.S. Federal Government for 30% of the net cost after the above mentioned funds, amounting to \$179,000 in the fourth quarter of 2009.

20. We started the UL certification process for our Mk-I HCPV panels with the delivery of several panels to the Underwriter Labs for evaluation. We completed Phase I of our UL certification program for the Mk-I HCPV panel in the second quarter and are working on Phase II.
21. We made a strong commitment to Asia with the addition of a new Director of Asian Business Development. This position will address the rapidly expanding markets in Korea, China and India.
22. We entered a new European marketplace in June 2009 with an initial delivery of HCPV panels and dual axis trackers to Portugal.
23. ODIS has continued to work with various U.S. military agencies and two large defense contractors in identifying two new products for their support through funding to ODIS.
24. We introduced two new tracker systems to be manufactured in the USA. One can be ground or roof mounted, and the second is larger and best suited for larger, utility scale installations.
25. We delivered an installation of HCPV panels and dual axis trackers to a second location in Italy in September 2009.
26. We added another Regional Director of Sales to cover the Eastern portion of the USA and Canada.
27. We began strengthening our Public & Government Relations efforts, resulting in CPV Technology related wording being proposed for U.S. Federal legislation and proposed financial incentives to be submitted to the U.S. House and Senate for adoption as The Solar Technology Roadmap Act ("STRA"). These activities greatly expand our public recognition and future project quoting opportunities.
28. In keeping with our planned cost reduction goals, we started a small pre-production level run of our Mk-I HCPV panels at a large contract manufacturer in Malaysia. This will also allow us to meet the volume required to fill our orders for 2010 delivery as well as future orders.
29. Through the Betasol Partnership, we completed another 110kW section of our solar field in Spain, bringing the total installation providing electricity to the grid to 330kW. The Spanish Government is due to confirm the feed-in tariff applicable to this installation in early 2010. See item 32 for more details.
30. Through our public relations program, management was asked to participate as CPV industry experts at various solar conferences. The Company's recognition has been raised because of numerous press interviews and articles quoting our management, thereby influencing the CPV industry.

**2010:**

31. In January, ODIS was awarded a \$750,000 SBIR contract in January 2010, to continue the development of infrared sensor technologies for use by the United States Air Force and the Space Missile Command.
32. The Spanish Government announced, in February, the feed-in tariff of 0.281 Euro to be used for the sale of electricity produced at our 330kW solar grid installation in Vilalba, Spain. This rate will be effective for all electricity feed to the grid over the next 25 years from the date of final inspection. The project is now receiving the feed-in-tariff.
33. The Portuguese Government has awarded us a 1MW installation in Portugal. If the Project proceeds, we will supply our HCPV panels and dual axis trackers, while Tecneira, our Portuguese installation partner, will complete the system installation in 2010 and 2011.
34. In March, the Company, together with its Portuguese construction partner, Tecneira Tecnologias Energéticas S.A. ("Tecneira"), signed an agreement with the Government of Portugal for the initial deployment of a proposed 1 MW HCPV installation to be located in Southern Portugal, with a final contract yet to be negotiated. If the Project were to proceed, the Company would supply its HCPV panels and tracker systems. There has been no further development to-date.
35. In March, ODIS was awarded a \$100,000 SBIR contract to perform research into an optoelectronic ultra low power random access memory ("RAM") for use by the United States Air Force.
36. In April, ODIS was awarded an additional \$750,000 SBIR contract to perform research into the development of optoelectronic directional couplers for optical switching fabrics for use by the United States Air Force and the Space Missile Command.



37. In April, ABB signed an LOI with OPEL Solar to supply its single axis tracking systems for a 24 MW utility grid installation in Nevada, to start late this year and ending in the first half of 2011. We received a Limited Notice to Proceed (“LNTP”) with a small purchase order while the final contract details are being negotiated. The owner subsequently sold the project to a third party and there has been no further development to-date.
38. In April, we qualified several US and Canadian manufacturers capable of supplying components for its new rooftop and ground mounted single axis tracking systems. This will allow any customer to support local manufacturing requirements.
39. In July, we stepped ahead in the market with its Brownfield initiative where OPEL will collaborate with municipalities and EPC’s to make solar installations out of otherwise abandoned and underutilized properties. We partnered with TRUENORTH Solar & Environmental in the Northeast, which is a proven construction partner capable of providing remediation of contaminated sites.
40. In August, ODIS was awarded a \$150,000 SBIR contract to perform research into optical code technology for the United States Navy, based on its POET technology.
41. We received prototypes in September of its next generation HCPV module, the Mk-1X, which is a 20% performance improvement over the previous module design and is much easier to assemble in volume.
42. In September, we added wireless communications capability to its tracker controllers used for all OPEL utility scale single and dual axis tracking systems. This greatly reduced the cost of installation as well as the ongoing maintenance of solar fields. In October, we were granted a US patent for the unique optical components of its revolutionary HCPV module technology.
43. In October, the Company and the National Research Council of Canada unveiled their SUNRISE Project installation at the University of Ottawa. The goal of this joint project is to develop the highest performance HCPV technology through the use of nanotechnology.
44. In December, we signed an agreement with Toray Plastics (America), Inc. (“Toray”) for a 446 kilowatt (kW) solar power plant at TPA’s 70-acre headquarters in North Kingstown, Rhode Island. This new utility field represents Toray’s first solar installation in the U.S. and will be one of the largest utility grade solar plants in Rhode Island. Toray Plastics chose OPEL Solar’s solution because of its higher energy production and lowest cost per kilowatt-hour generated, which is largely due to our utility scale single axis tracker – the TF-800, which significantly increases the energy output of any type of photovoltaic (“PV”) panel.
45. In December, we signed a joint venture agreement with Ecotech Environmental Technology Ltd (“Ecotech”) for the formation of OPEL Solar Asia Ltd (“OSA”) in Hong Kong. For us this represents the beginning of a long-term goal to position the Company to enter East Asia, developing the HCPV market into what has been deemed the fastest growing solar market in the world with years of strong growth projections ahead. The creation of OSA included an initial purchase order for two megawatts (“MW”) of OPEL Solar’s HCPV system products both the solar modules and tracker models.

**2011:**

46. In January, ODIS was awarded a development contract from the National Aeronautics and Space Administration (“NASA”) that will involve a Phase I Award of \$100,000 to develop Optoelectronic Infrastructure of RF/Optical phased arrays.
47. In March, we announced it was in receipt of a third party valuation for its POET technology which had been developed by its U.S. affiliate ODIS Inc.
48. In March, the 2MW order of December 2010 from its Chinese venture partner, OPEL Solar Asia, for our HCPV solar panels and dual axis tracking systems, was increased to a 5MW order. Initial deliveries started in Q3 2011 and will complete in 2012.
49. In March, we were awarded a contract to deliver a 35kW solar installation at the Aquarion Water Company’s local water treatment facility. The installation will showcase OPEL’s TF-800 single axis tracking system as well as the SF-45 dual axis tracker. Solar power is well suited to the power usage of a water treatment facility and is expected to produce 10% of their power requirements.

- Installation expected to complete in 2011. Aquarion may wish to expand its usage of solar power in the future.
50. In April, we were awarded a contract to deliver a 125kW TF-800 single axis tracker order from Greenlight Power Company for the first phase of a 1.4MW solar farm for a business park in Maryland. The installation is completed.
  51. In April, ODIS demonstrated an on-chip laser capability for the first time in gallium arsenide. This proves ODIS's POET technology is capable of producing a monolithic integrated circuit combining both electronic and optical elements.
  52. In May, we were awarded a turn-key solar installation of 95kW by the Town of Newtown, CT. OPEL is using its TF-800 advanced single axis tracking system and silicon solar panels to power Newtown's waste water treatment facility. The installation is in progress.
  53. In May, we were chosen to be the exclusive, worldwide supplier of trackers for Grape Solar, a major supplier of solar panels. We intend to use Grape to supply some of our installations, like Newtown, going forward.
  54. In June, BAE Systems successfully produced working transistors on gallium arsenide wafers using ODIS's POET technology. This is the first step in validating the ability to commercialize products developed using the POET technology, which is capable of integrating optical and electronic circuits within the same chip.
  55. In June, we signed an agreement with the second of China's five utility companies, in June 2011, for the delivery of its HCPV panels and trackers. This was done through the Chinese JV with Ecotech, a relationship which is growing rapidly to meet the demands of the solar market in China. This doubles the previous orders, by adding another 5MW of CPV and trackers, to be delivered in late 2011 through 2012 to solar fields in Inner Mongolia.
  56. ODIS has contracted with BAE Systems to produce a series of wafers from their foundry with devices developed using the POET technology. The first wafer lot commenced in late August.
  57. We have initiated Warranty Insurance coverage for our trackers and our trackers have passed critical reviews by several independent engineering firms, all of which allow its trackers to be "bankable" for commercial installations.
  58. In August, OPEL changed its name to 'OPEL Technologies Inc.' and started trading on the TSXV under the new name.
  59. GrowthPoint Technology Partners was selected to provide us with strategic advice relative to ODIS' proprietary POET technology and how to optimize its value for the Company and its shareholders.
  60. In September, we completed the delivery of 480kW of its TF-800 single axis tracking system to Conergy for an installation in California's Central Valley to power a waste water treatment facility.
  61. In September, OPEL entered into an Equity Line of Credit arrangement with Kodiak Capital Group which, upon acceptance of a Prospectus with the Ontario Securities Commission, would allow the Company to draw up to \$10M over time, in exchange for shares of OPEL priced at the time of the drawn-down. The draw-down will only occur if the funds are required to meet growth opportunities.
  62. Our TF-800 single axis tracking system receives the nod of approval from three independent engineering firms for its structural integrity, wind tunnel testing, and technology assessment. The TF-800 was found to meet or exceed the standards requirement of the American Society of Civil Engineers and the American Institute of Steel Construction. We also secured Manufacture's Product Warranty Insurance provided by Energi Insurance Services. This all makes our trackers bankable to a project investor.

## **DESCRIPTION OF BUSINESS**

### **General**

#### **a) Summary**

The Company is incorporated under the laws of the Province of Ontario. OPEL is engaged in (a) the design, manufacture and marketing of high-concentration photovoltaic panels and dual- and single-axis

trackers for related CPV and PV systems for energy applications worldwide and (b) through ODIS Inc., a U.S. company, designs III-V semiconductor devices for military, industrial and commercial applications, including infrared sensor arrays and ultra-low-power random access memory. OPEL has 35 patents issued and 12 patents pending in PV systems and for its semiconductor POET process, which enables the monolithic fabrication of integrated circuits containing both electronic and optical elements, with potential high-speed and power-efficient applications in devices such as servers, tablet computers and smartphones. The Company's shares trade under the symbol "OPL" on the TSXV.

i) Solar Business

The mission of OPEL Solar is to develop and supply innovative solutions to harness electricity from the sun in the most efficient and cost effective manner. OPEL designs, manufactures and markets high concentration photovoltaic ("HCPV") panels to transform solar energy into electricity for worldwide application. Concentrating photovoltaic systems are the next generation in solar technology that will be deployed. The high efficiency of the OPEL HCPV panel results in significantly higher power generation per unit of area when compared to both silicon flat panel and thin film installations. OPEL's HCPV panels, or any other PV panels, when mounted on OPEL's dual axis trackers, can increase the energy production by up to 45% with respect to a fixed mounted system, resulting in more cost effective electricity generated from the sun. With its unique design and high efficiency, OPEL strives to become the leader in HCPV solar panels. OPEL is working on a product roadmap to lower the cost of its HCPV panels to grid parity.

OPEL also markets a complete line of single and dual axis solar trackers to mount solar panels for the optimum power output. In fact, during the 2010 business year, a new single axis solar tracker was introduced to the market called the TF800. This tracker highlights ease of installation in the construction process and incorporates backtracking capability in order to reduce any impact from shadowing. Additionally, OPEL trackers have a wireless control capability to reduce installation and maintenance costs associated with large solar field operations. These are some examples of the innovative spirit which runs as a common thread through out OPEL Solar.

Europe has been an early adopter of solar energy including next generation methods like HCPV. Moving to increase OPEL's presence in Europe, OPEL formed OPL Solar Europe SPRL ("OSE"), a Belgium-based subsidiary, to better address business opportunities in Europe. OPEL's business development activities in Europe led to growing project opportunities in Europe, Africa and Asia. In 2010, OPEL Solar formed OPEL Solar Asia, a joint venture with Ecotech Environmental Technology, a Hong Kong based company, to service the growing market in Asia, especially in China.

ii) Semiconductor Technology

OPEL, through ODIS Inc., a U.S. company, (an acronym for "OPEL Defense Integrated Systems"), designs a wide array of devices for military, consumer, commercial, and industrial applications. ODIS continues to develop gallium arsenide-based chip design processes having several potential major market applications, including: (i) infrared sensor arrays for military as well as Homeland Security monitoring and imaging, and (ii) the unique combination of optical lasers, and electronic control circuits on the same microchip for potential use in various military programs and potentially telecom applications such as, Fiber To The Home ("FTTH"). The use of gallium arsenide is a key material in ODIS's POET process development for these products. ODIS has been awarded more than a dozen U.S. Department of Defense projects since 2000. These have supported and continue to support the development of ODIS's POET process, infrared sensing technology, optical/laser development and the combination of electronic circuits and lasers on the same microchip. ODIS remains active in this area with several recent projects underway with the U.S. Department of Defense and two major U.S. Defense Contractors. ODIS believes that the POET technology which provides a unique chip development platform will in the future have a significant impact on products for commercial and government market sectors. Under the supervision of Dr. Geoffrey Taylor, the Chief Scientist of ODIS built actual wafers containing multiple devices using the POET technology in June 2011. In March 2011, a third party valuation of the POET technology was received indicating a significant potential market value of the intellectual property of this technology. In June 2011, BAE Systems

independently produced operational transistors on gallium arsenide wafers, further validating critical components of the POET process.

**Sales and Distribution** - Our customers for solar products tend to be large engineering, procurement and construction (“EPC”) firms and solar integrators interested in building large utility grade installations to produce electricity to be fed into the grid. Some of our customers are larger manufacturing companies, office buildings, large stores and municipalities looking to take control of and lower their long term cost of electricity through the deployment of solar technologies. We have a small, but growing sales group that keeps contact with these solar EPC’s and integrators to respond to quotes and build the project backlog. In addition, we have a number of strategic located sales representatives to help us in growing the business in specific regions of the world.

All of our solar panels and tracking systems are currently distributed on a direct sales basis from the location of manufacturing.

Currently ODIS’ customer is the US Government (Air Force, Navy, NASA), however this may change with ongoing developments of POET, once we can demonstrate POET’s usefulness in commercial applications.

**Industry Outlook** - Alternative energy has attained a position of heightened awareness due to the high cost of all forms of energy over the past few years and recently the concern with nuclear power. In addition, the world wide concern over the carbon footprint left from the pollution of fossil fuel use, global warming and homeland security concerns regarding the safety and reliability of foreign energy sources have all contributed to the demand for alternative energy solutions. In order to have widespread adoption and installation of alternative energy sources, like solar and wind, it requires a financial subsidy or feed-in tariff to make these sources competitive with fossil fuels for the medium term.

The German market has enjoyed a robust solar installation market for several years due to a well thought out feed-in tariff structure provided by its Government to initiate early adoption of solar. Following that lead, Spain put in place a feed-in tariff which led to a boom in wind and solar installations. Other European countries like Italy, Portugal, France, and Greece have followed suit, allowing their countries to benefit from greener energy sources while lowering their dependence on fossil fuels. Whereas, the unrest in North Africa and tensions in the Middle East have slowed solar activity as have the recent economic conditions in Europe have made it necessary for most countries to scale back level of the feed-in tariffs, the commitment has been maintained to provide some incentive in order to expand solar adoption.

China has announced to the world one of the most aggressive goals for renewable energy usage, and it is working out the project details and financial support of a huge solar installation program. In Canada, Ontario is moving rapidly into the solar arena with a multi-structured feed-in tariff, one of the world’s highest, to address grid field applications as well as commercial and residential rooftops. The United States has begun to become more active with solar and wind over the past several years with a combination of State and Federal subsidies beginning to be enacted. Currently, the installed base is still relatively low, but is showing signs of steady and continued growth. With the U.S. stimulus package put in place in early 2009 and the government’s work to support manufacturing and jobs creation, solar activity in the United States is increasing. It is widely accepted that should the United States pass further Federal legislation for a clean energy bill, the market potential in the U.S. for renewable energy sources like solar provide steady growth.

The relative size of planned and quoted installations demonstrates that a huge growth cycle is starting. We have seen the average selling price (“ASP”) of top quality silicon solar panels drop from \$4.50 per watt in early 2008 to \$1.00-1.10 per watt today with further drops expected in 2012. This aids greatly in the adoption of solar and demonstrates the ability for solar power to approach grid parity with fossil fuels. The lower ASP is a direct result of the large production volume providing the necessary economies of scale, like any other product. Ultimately, the goal is for solar power to be competitive on its own merit, without any subsidy.

HCPV, being a new technology, is going through the same market adoption cycle which was travelled by conventional silicon panels many years ago as well as thin film panels most recently. Once the

technology is proven in installations, it becomes “bankable”; and the large installers and project developers would begin to deploy it in large scale.

**Key Success Drivers** - The Company has several Key Success Drivers (“KSD”), including its emphasis on vertical integration, its HCPV panels, its single and dual axis tracker systems, integrated wireless tracking technologies, and the POET technology.

Our HCPV panels have a much higher production efficiency than standard silicon panels and thin film panels. This industry leading efficiency should stimulate a higher level of product acceptance over time. In 2009, we installed its first fully operational and revenue producing 330kW HCPV solar grid field in Spain. This installation has allowed us to show potential customers a working commercial solar grid field of its HCPV solar panels and dual axis tracking systems, to demonstrate their functionality and higher output as compared to silicon based solar panels, which are more prevalent in the industry. This has led to additional orders for HCPV from companies in Portugal, France and China. We are confident that HCPV will be the next big solar application for areas of high solar irradiance.

In addition to our HCPV panels, we also demonstrated our single-axis rooftop tracker capability in 2009, with an installation on a school roof in Connecticut. After 2 years of operation, the installation continues performing well above expectation, providing electricity at a reduced cost to the school system. Our solar tracking systems, roof mounted or ground mounted provide a way for customers to increase the kWh production of most solar projects by 20-45% over fixed solar installations. We provide a complete line of single and dual axis solar tracking systems for use in commercial or utility grade installations. Another KSD added in 2010 is the TF-800 series of single axis trackers mentioned above. However, it bears re-emphasizing that this line of trackers is very attractive for utility scale projects due to its ease of installation, its reverse tracking capabilities and its wireless network control technology. The TF-800 was found to meet or exceed the standards requirement of the American Society of Civil Engineers and the American Institute of Steel Construction thereby exceeding the bankability needs of our customers. As our deployment and technology successes continue to grow, our tracker message grows exponentially into the marketplace as well, significantly increasing interest in our solar tracking systems in the United States in the last year. We have been actively quoting many utility scale installations, in many cases providing a “one stop shop” approach and sometimes including construction management, and will be a beneficiary of that growth as projects are launched. Some of the recent projects for Toray Plastics, Aquarion Water Company, Newtown Water Treatment, Conergy, and Schroeder Solar Homes are examples of a growing list of projects addressed at these different levels.

We believe that the financing of solar projects is starting to gain momentum and support. In addition, the U.S. alternative energy stimulus package, individual State incentive programs, as well as the revised Ontario Standard Offer will stimulate more growth and acceptance of solar power throughout North America. We are concentrating our sales efforts for both solar panels and our universal tracker systems in those locations in China, Europe and North America that have active feed-in tariffs or alternative energy stimulus packages which will result in more near term revenue opportunities.

We believe that it has grown to be recognized as part of the most competitive group of CPV companies producing concentrated solar panels. We are on its way to being a market leader in this category as no single CPV competitor has a much larger ‘installed’ base. While our greatest competition is from standard silicon panels which make up more than 90% of the currently installed base, we also offers a full line of universal single and dual axis tracking systems to use with our HCPV panels or any other solar panel types, suited to any specific locations. This gives us an advantage in that we have a solar solution for all types of installations, and that fact opens the spectrum of solar project to us.

ODIS designs infrared sensor type products for military and industrial applications. ODIS develops gallium arsenide-based processes and semi-conductor microchip products having several potential major market applications: infrared sensor arrays for Homeland Security monitoring and imaging along with the unique combination of optical lasers, and electronic control circuits on the same microchip for potential applications in various military programs, higher efficiency computing systems, and potentially telecom for Fiber to The Home. ODIS chip design capabilities allow for optical and electronic signals to be used

on the same chip when necessary and allow for direct connection to optical fiber without conversion to electronic signals.

**Strategy** - During 2011, there are a number of projects planned which will address the short-term and long-term goals of the Company including, but not limited to the following:

- Target sales and marketing efforts to the following customer markets: Independent Power Producers (IPP), Utilities in high REC areas, Brownfields, Distribution Centers, Parking Garage Owners, Convention Centers, Malls, and Municipalities and Governments with high Renewable Energy Standards.
- Establish additional teaming relationships to expand the Company's access to project opportunities and expand its technical capabilities.
- Pursue selected Program Management and "One-Stop-Shop" opportunities where the potential exists for multiple projects with the same customer such that the Company is at the top of the decision chain.
- Develop a "drop-in" solution for the military marketplace using the POET technology, develop a Military Spec focused device and acquire a Contractor and Government Entity (CAGE) Code for its products.
- Continue to work on a series of phased cost reductions geared at lowering the cost of our Mk-I HCPV solar panels by up to 40%, while continuing to increase their efficiency.
- Increase the North American production capability for its single and dual axis tracking system, for both roof and ground mounting. Identify multiple sourcing capabilities to handle projected growth.
- Begin to search for resources to fill out key management and field operational positions to sustain growth as orders increase.
- Establish an internal development division to create future solar projects for the Company.
- Establish an integrator network to help promote our solar products in Mexico, Canada and the U.S.
- Identify and cultivate relationships with strategically located and positioned Solar EPC's to be able to provide turn-key solar installations for larger customers with utility scale installations in mind.
- Develop a small/medium solar package program targeted at municipalities that can be offered in the form of a PPA in selected states where incentives are favorable to package these projects to investors.
- Identify and cultivate external funding sources interested in solar project finance or ownership.
- Complete the third party validation of the patented POET technology to a fabrication facility that can prove its viability and product potential through ODIS.
- Lobbying for U.S. Solar Legislation favoring HCPV incentives and other solar related financial opportunities, like feed-in tariffs or State and Federal grants.

**Outlook** - We currently has active price quotations for its solar products of over \$850M for multiple projects to be delivered globally in 2012 and 2013. The size of these projects range in size from 1.5MW to 250MW with multiple EPC partners. There can be no assurance that these price quotations will result in installations or revenues to the Company. The growing market acceptance of our products are due to the increasing effectiveness of our sales and marketing efforts. The projects on which the Company has provided such price quotations has increased in size from our current average installation of 500kW - 2.5MW in 2011 to 10 - 20MW in size for future years.

## **b) Production and Services**

We outsource the manufacturing of our HCPV solar panels to contract manufacturers in Malaysia. Our solar tracker systems are also outsourced to several manufacturers in the United States and Spain.

Our HCPV solar panels are manufactured in Malaysia. Our solar tracking systems are manufactured in Spain and the United States, depending on the model and intended delivery location. We are considering

using local contract manufacturing in other countries where sales volumes justify and properly skilled labor is available.

Our tracker systems are predominately made from steel and therefore not as dependant on key component suppliers. OPEL also uses multiple suppliers of most sub-components to minimize supply constraints.

Our contract manufacturers have the assembly employees, equipment and buildings necessary to mass produce our products to our specification. They also have the purchasing power and supply agreements necessary to secure the supplies and sub-assemblies to produce our products.

The key component of our concentrated solar panels is supplied by Boeing-Spectrolab. It produces the highest efficiency multi layered solar cell on the market and we have secured a multi-year supply agreement.

By outsourcing our manufacturing requirements, we avoid significant costs associated with owning, operating and upgrading fabrication facilities, and are able to focus our resources on product development and design and test applications.

### **c) Specialized Skill and Knowledge**

***Our People*** - We believe that our future success is dependent on our ability to attract, retain and motivate highly skilled employees, including our design, engineering, support, operations, sales and marketing personnel, as well as senior corporate management. In support of our corporate objectives, and to provide opportunities for fulfilling work, career advancement and a sense of pride, we have fostered a high performance culture among our employees under which an ownership philosophy is promoted and leading contributors are recognized. We endeavour to hire top talent within our organization. We also utilize outside contracting firms to assist in certain specific tasks as required, allowing for lower permanent headcount and allowing our staff to concentrate on their field of expertise.

***Research and Development*** - The markets in which we compete are characterized by constant and sometimes rapid technological change, evolving technical standards and declining product pricing. We believe that our future success is largely dependent upon our ability to continue to anticipate and respond to these changing industry dynamics and standards and to improve our products and develop new technologies to address the needs of our customers. Our product development efforts are focused on designing new products based on our understanding of the evolving needs of our customers in this rapidly changing marketplace. We work closely with our customers to identify their future needs and to develop products designed to fulfill such needs. We have a dedicated team of engineers who follow technology changes, developments in industry standards and the product needs of our customers, as well as the competitive products offered in the marketplace, in an effort to formulate our forward-looking "product roadmap".

In addition to addressing these needs, our design efforts are focused on the use of high concentration to produce our innovative solar panels, and thereby differentiating our products from those of our competitors. In order to reduce design cycle time and first-time errors, we have developed, and intend to continue to develop, a highly skilled staff of optical and semiconductor engineers to keep our products in the forefront of concentrated solar.

OPEL has invested significant R&D on new commercial line of trackers. During the 2010 business year, a new single axis solar tracker was introduced to the market called the TF800. This tracker highlights ease of installation in the construction process and incorporates backtracking capability in order to reduce any impact from shadowing. Additionally, OPEL trackers have a wireless control capability to reduce installation and maintenance costs associated with large solar field operations. These are some examples of the innovative spirit which runs as a common thread through out OPEL Solar.

OPEL, through ODIS Inc. designs a wide array of devices for military, consumer, commercial, and industrial applications. ODIS develops gallium arsenide-based chip design processes having several potential major market applications, including: (i) infrared sensor arrays for military as well as Homeland Security monitoring and imaging, and (ii) the unique combination of optical lasers, and electronic control circuits on the same microchip for potential use in various military programs and potentially telecom

applications such as, Fiber To The Home (“FTTH”). The use of gallium arsenide is a key material in ODIS’s Planar Opto-Electronic Technology (“POET”) process development for these products. The development of ODIS’s POET process, infrared sensing technology, optical/laser development and the combination of electronic circuits and lasers on the same microchip have been financed by SBIR contracts. ODIS remains active in this area with several recent projects underway with the U.S. Department of Defense and two major U.S. Defense Contractors. Under the supervision of Dr. Geoffrey Taylor, the Chief Scientist of ODIS built actual wafers containing multiple devices using the POET technology in June 2011. In June 2011, BAE Systems independently produced operational transistors on gallium arsenide wafers, further validating critical components of the POET process. In August 2011, BAE Systems ran a lot of five wafers using POET Technology. The chips that come from these wafers will be tested to further validate the varied capabilities and devices developed utilizing the POET Technology platform.

We have research, engineering, and product development resources located at Shelton and Storrs, Connecticut. We believe that our design centers are located in areas of strong technical talent pools.

#### **d) Competitive Conditions**

The markets for our products are highly competitive and subject to rapid technological advancements in design technology and alternate technologies. In order to be successful, and to offset the price erosion that affects many aspects of our industry, we strive to identify and capture future market opportunities by developing and deploying the highest efficiency panels to the market.

Having recognized the difficult economic environment towards the end of 2008, we implemented a strategy to move forward, but at the same time preserving cash, a strategy that continues today. However, we chose not to wait on our development programs and to make customer headway during this difficult period so that, when the economic situation improved, we would have strong customer momentum. We installed our first fully operational HCPV solar grid field in Spain. This grid is expected to be sold to a power provider who will receive the feed-in tariff for solar issued by the Spanish Government. This strategy has allowed us to increase our production capability and start to decrease the costs of our HCPV solar panels to ensure we are competitive as the market for larger HCPV projects in the backlog increases in late 2010. This strategy has also allowed us to show potential customers working solar grid fields of our HCPV solar panels, to demonstrate their functionality and output as compared to silicon based solar panels, which are more prevalent in the industry.

We feel that we are close to or ahead of the other competitors producing concentrated solar panels as no single competitor has a much larger installed base. We also feel that our greatest competition is from standard silicon panels which make more than up 90% of the currently installed base. Concentrated solar, being a new technology is going through a learning curve which was travelled by conventional silicon panels many years ago. Concentrated solar panels, however, have a much higher production efficiency potential which should stimulate a higher level of product acceptance over time. If the prices of silicon panels manufactured in China continue to decline due to subsidies by the Chinese government, there is no guarantee that the production of the HPCV panels will decrease comparatively.

We often face competition at the "design stage", during which customers evaluate alternative design approaches in the development of their systems. During design stage evaluation, our customers assess our products and IP along with those of our competitors and make a selection based on a variety of factors including the robust design characteristics of our panels and trackers, panel efficiency, reliability and pricing. Over the next few years, we expect additional competitors, some of whom may have greater financial and other resources, to enter the market with new products. In addition, we are aware of smaller, privately-held companies that focus on specific portions of our range of products. These companies, individually and collectively, represent future competition for design wins and subsequent sales.

#### **e) New Products**

***HPCV Developments*** - We have run pre-production quantities of the Mk-I HCPV panels, analyzed the output, made modifications, and have moved to low volume production. We competed the preliminary



certification against IEC 62108 standard which is the universally accepted certification for HCPV modules. Certification will be completed once the new version panels roll out of the production line in the first quarter of 2012. This IEC compliance is required to sell products into most foreign markets and, eventually in the US.

***Tracker developments*** - The successful introduction of the TF-800 family of utility scale trackers coupled with our patented wireless control and remote supervision capability has resulted in opening new markets and opportunities primarily in the US. The TF-800 family of trackers has quickly gained recognition in the market place as the most cost effective and easy to install product of its kind. Several megawatts worth of products have been shipped to customers to date and several hundred megawatts worth of product have been quoted in response to requests for proposal (RFP) from recognized solar developers and engineering firms.

A roof top version of the tracker, the TF-400 (SF-40 in Europe), has been recently introduced and initial orders are being received.

***ODIS Development*** - Going forward, we plan to continue to make strategic investments in research and development with a view to developing a broad chip design platform capable of producing a significant number of new features, enabling our customers to capitalize on opportunities to produce leading edge chip technologies for their target markets.

#### **f) Components**

HCPV. The most key component of our concentrated solar panels is supplied by Boeing-Spectrolab. They produce the highest efficiency multi layered solar cell on the market and we have secured a multi-year supply agreement with them.

Trackers. The bulk of the tracker hardware consists of fabricated steel from various qualified suppliers. Multiple compatible sources exist for all the OPEL designed parts and production capacity can be increased (or reduced) on very short notice. The most critical component is the Tracker Control Unit (TCU) which is presently sourced from P4Q Electronics in Spain. A new design is being worked on that reduces the number of TCUs per tracker, both as a cost reduction to the product, as well as a way to reduce the dependence on production throughput and lead times on this component.

#### **g) Intangible Properties**

***Intellectual Property*** - We utilize proprietary designs and processes in the design and manufacture of our products. We hold 35 patents in various countries, including the United States, Canada, Japan and China, as well as in the European Union. 16 additional patents are also pending. We have a number of registered trademark and service marks in the United States.

We rely on a combination of patent, copyright, trademark and trade secret laws to protect our rights. In addition, we maintain internal security measures and require non-disclosure and similar provisions in contracts with our employees, customers and suppliers. We consider our intellectual property to be a valuable and growing asset.

#### **h) Cycles**

The solar energy industry is seasonal relative to the weather of the location of any installation and is characterized by constant and rapid technological change, product obsolescence, price erosion, evolving technical standards, and wide fluctuations in product supply and demand. From time-to-time, these and other factors, together with changes in general economic conditions, cause significant upturns and downturns in the industry and within our business.

In addition, our operating results are subject to substantial quarterly and annual fluctuations due to a number of factors, such as size and timing of orders, products and services to be delivered, and manufacturing start-up.

### **i) Employees**

At the end of our financial year ended December 31, 2010 and November 30, 2011, we employed 28 people in our operations. The functional breakdown of our employees is as follows:

Administrative - 3  
 Research & Development - 16  
 Operations - 1  
 Marketing and Sales - 8

We believe that our future success is dependent on our ability to attract and retain highly skilled employees. We are dependent on our highly talented engineers and designers, as well as skilled sales and marketing personnel.

### **j) Foreign Operations**

The foreign operations of OPL Solar Europe were established to enable our European partners to find customers looking for solar installations to provide electricity in their host countries at an economically favorable rate per kWh over many years. Once a customer and site are identified, they coordinate the installation until completed and turned over to the customer.

The mission of OPEL Solar Asia Ltd. is to market OPEL HCPV products throughout East Asia. The primary country targeted for CPV market penetration is China.

OPEL Solar, Inc. in the U.S. and Ecotech Environmental Technology Ltd (“Ecotech”) based in Hong Kong, are the two partners in the joint venture (“JV”). For OPEL this represents the beginning of a long-term goal to position OPEL to enter East Asia, developing the HCPV market. In signing the agreement, OPEL Solar’s advanced HCPV technology moves into what has been deemed the fastest growing solar market in the world with years of strong growth projections ahead.

### **Bankruptcy and Similar Procedures**

There have been no bankruptcy, receivership or similar proceedings against us or any voluntary bankruptcy, receivership or similar proceedings by us within the three most recently completed financial years or during or proposed for the current financial year.

### **Reorganizations**

We have had no material reorganizations within the three most recently completed financial years or since the beginning of the current financial year.

### **Social or Environmental Policies**

We have an environmental and health and safety policy in place that addresses applicable requirements under environmental, health and safety laws and our own internal corporate environmental standards. The policy also serves to communicate our environmental, health and safety requirements and programs to our employees and to contractors, customers, suppliers and the public as necessary. We periodically evaluate our activities, establish objectives and measure our performance in light of the objectives set out in our health and safety policy. The policy provides, among other things, that all our employees are to be aware of their roles and responsibilities in fulfilling the objectives of the policy.

We believe that our products are compliant with the requirements of all jurisdictions within which we operate.

### **Risk Factors**

We are subject to a number of risks and uncertainties that could significantly affect our financial condition and performance. As we grow, continue our commitment to R&D, and enter into new markets, these risks can increase and/or change. Key risks include, among others:

1. Highly Competitive Environment - The solar industry is extremely competitive. We compete in our target markets with many companies including those who manufacture, sell and install silicon flat

panels. Our HCPV solar panels are a new technology which has little installed base and may not be embraced for large scale installation. We compete on the basis of technical performance, product features, price, availability, quality and sales and technical support. Our ability to compete successfully depends on elements both within and outside of our control, including successful and timely development of new products, product performance and quality, product availability, intellectual property protection obtained by us and our competitors, customer service, pricing, industry trends and general economic trends. The entry of new competitors or new technologies into the market, or the introduction of competitive products on a timelier basis, or with superior functionality to our products, could have a material adverse effect on our business, results and financial condition. Please also refer to “*Description of the Business – Competitive Conditions*” above.

2. **Economic Cycles** - Historically, the solar industry has been characterized by wide fluctuations in supply and demand. The industry has also experienced significant downturns, often in connection with, or in anticipation of, declines in general economic conditions. These downturns have been characterized by diminished product demand and production overcapacity. In times of high growth, production capacity may be unavailable. While we maintain dialogue with customers to gauge current and expected market conditions and spending patterns, fluctuations in the business environment can occur quickly and with little warning. Please also refer to and “*Description of the Business – Cycles*” above.
3. **Rapid Technological Change** - Our products are highly reliant upon keeping pace with technological changes, since they are complex and rely on state-of-the-art design methodologies to optimize them for market. If we cannot afford to keep pace with these changes, it may have a material adverse effect on the Company. Demand for our products may change in ways which may not be anticipated because of evolving industry standards or as a result of evolving customer needs that are increasingly sophisticated and varied, or because of the introduction by competitors of new services and technologies. Innovations aimed at offering enhanced or new services generally may require a substantial investment before we can determine their commercial viability, and we may not have the financial resources to fund such initiatives. Even if we were to succeed in creating new services or technologies, they may not produce revenues in excess of the costs of development and they may be quickly rendered obsolete by changing customer preferences or by technologies or features offered by our competitors.
4. **Liquidity Risk** - We currently do not maintain credit facilities, and rely on previous equity funding for liquidity to meet current and foreseeable financial requirements. We may not have adequate financial reserves to enable us to grow at the pace required to serve our customer base if substantial orders were received and were backlogged. The contractual maturity of financial liabilities mainly comprising accounts payable and accrued liabilities is less than one year, as at the latest reporting date. On November 21st, 2011, the Company entered into a Credit Facility with Silicon Valley whereby the Company draw-down up to \$5 million based upon its receivables.
5. **Foreign Exchange** - Our functional currency is the Canadian dollar (CAD), however our operations are currently in the United States and measured in US dollars (USD), which operations are considered to be self-sustaining. Operations in foreign markets are exposed to the risk of foreign currency fluctuations for transactions denominated in a currency other than the functional currency of the Company’s foreign operating unit. Currencies in which we are exposed to foreign currency risk are mainly the CAD and Euro. Since our operations predominantly transact their sales and purchases in their respective domestic currencies, the exposure is reduced. Therefore, we typically do not hedge accounts receivable and accounts payable that are denominated in a foreign currency. However with the recent wild fluctuations between the USD and the CAD, the Company could be exposed to a gain or loss for cash and investments held in CAD.
6. **Reliance on Third Parties** - We currently rely on external manufacturers and providers to manufacture certain products used in our components. Although we continue to develop our production capabilities, we rely on certain external providers. While we have been able to maintain good

relationships with suppliers, increased demand for our products or those of our competitors can lead to increased demand on these providers.

There are risks associated with our reliance on independent manufacturers. For instance, any failure of these manufacturers to continue to provide the necessary capacity or output for our products could result in significant production delays and could materially and adversely affect our business, financial condition and results of operations. From time to time, it is possible that we may not be able to secure adequate manufacturing capacity on acceptable terms, if at all. Also, should a supplier suffer damage to or destruction of its facilities or experience financial difficulties or any other disruption of manufacturing capacity, we may not be able to secure alternative manufacturing sources for our products in a timely manner. Accordingly, while we believe that we have sufficient access to manufacturing capacity to support our current requirements, it is possible that the capacity we will need in the future may not be available to us on acceptable terms, if at all.

As we rely on independent manufacturers to produce products of acceptable quality in a timely manner, we are also subject to risks associated with limited control over delivery schedules, reductions in manufacturing yields, the possibility of manufacturing defects, possible increased production costs and variable product quality.

Any disruption in supply could have a material adverse impact on our business, results and financial condition. Please also refer to “*Description of the Business – Production and Services*” above.

7. **Reliance on Key Employees** - Our future success is dependent on our ability to attract, retain and motivate highly skilled employees, including design, engineering, support, operations marketing and sales personnel, as well as senior corporate management. We face a high degree of competition in the industry for these highly-skilled employees. The present stage of our new businesses also requires that we search for, attract and retain highly qualified sales and marketing personnel, which activity continues to be a challenge. The loss of certain key employees, or the inability to hire and attract key employees, could adversely affect our business, results and financial condition.
8. **Investments and Acquisitions** - We may, in the future, make strategic investments or acquisitions or enter into joint ventures or strategic alliances with other companies. Such transactions may entail risks, including: inability to successfully integrate businesses; inability to realize synergies or other value associated with such transactions; diversion of management’s attention and disruption of ongoing business; and inability to retain key personnel. In addition, future investments or acquisitions may result in the issuance of additional equity or debt securities, borrowings, and significant one-time costs and write-offs. In the event that we need to raise additional funds, we may not be able to obtain such funds on a timely basis or on acceptable terms.
9. **Need to Manage Growth and Expansion** - To manage growth, including geographic expansion, we must continue to implement and improve operational, financial and management information systems and to hire, train, motivate, and effectively manage additional qualified personnel. Our continued expansion into international operations exposes us to additional risks that include greater difficulties in collecting accounts receivable, increased costs with respect to differing regulatory requirements, challenges in enforcing intellectual property rights, language barriers, political instability and potential adverse tax consequences. Failure to successfully manufacture and sell products internationally will impact our ability to increase future revenues and grow the business. We have no history of profitability and may not be able to sell enough products at a high enough margin to cover our costs of operation on an ongoing basis.
10. **Reliance on Key Customers** - If one or more customers were to delay, reduce or cancel orders, the overall orders could fluctuate and adversely affect revenue either at the corporate or divisional level. One customer accounted for 67% of total revenue in the 2010 fiscal year. Two customers accounted for 67% of receivables as at December 31, 2010. Our customers may not be able to find adequate financing to support the build-out of larger solar projects using our products.
11. **Intellectual property** - To compete effectively, we must protect our IP. We rely on a combination of patent, copyright, trademark and trade secret laws to protect our rights. There can be no assurance that these efforts will prevent misappropriation of such intellectual property by competitors. In addition,

although we do not believe we are infringing on the intellectual property rights of others, claims of infringement are becoming increasingly common in the industry. In asserting claims or defending against claims, we may become involved in time-consuming and costly disputes or litigation. An unfavourable judgment or prolonged legal action may have a material adverse effect on our business, results and financial condition.

12. **Fair Value Risk - Market risk** arises from the possibility that changes in market prices will affect the value of our financial instruments of the Company. We are exposed to fair value fluctuations on its short-term investments and marketable securities. Our other financial instruments (cash, accounts receivable and accounts payable and accrued liabilities) are not subject to market risk, due to the short-term nature of these instruments.
13. **Environmental, Climate Change and Health & Safety** - We are subject to a variety of laws, rules and regulations relating to environmental issues. We believe that we are complying with these laws, rules and regulations. The failure to comply with present or future regulations could result in legal claims, fines, suspension of production or a cessation of operations. A failure to avoid such results could have a material adverse effect on our business, results and financial condition. Also, we could be required to acquire equipment or incur other expenses to achieve compliance, which might result in significant additional costs. We face few, if any, of these issues directly as we use contract manufacturers and the inherent characteristics of our products are not environmentally hazardous. However, our products allow our customers to make great contributions to climate change. Each 1MW of our HCPV panels installed by a customer avoids 600 tons of CO<sub>2</sub> from being discharged into the atmosphere each year, the equivalent of planting 93 acres of trees.

## **DIVIDENDS**

We have not established a policy of declaring or paying dividends. We have never declared or paid dividends and do not expect to do so in the foreseeable future.

## **DESCRIPTION OF CAPITAL STRUCTURE**

### **General Description of Capital Structure**

The authorized share capital of OPEL consists of an unlimited number of common shares (“Common Shares”) and 1 Special Voting Share.

### ***Outstanding Share Data***

**Common Shares** - As of December 31, 2010 and November 30, 2010, there were respectively 85,292,514 and 93,025,421 Common Shares of OPEL issued and outstanding.

**Special Voting Share** - Additionally, as of December 31, 2010, there was one (1) Special Voting Share which carries 1,358,000 votes. The Special Voting Share currently carries 135,000 votes, a reduction from Year End, due to the exchange of some of the Exchangeable Shares. These votes are for the benefit of the holders of exchangeable shares of OPEL Solar. The Exchangeable Shares are convertible into Common Shares of OPEL on a one for one basis. As at December 31, 2010 and November 30, 2011, there were 1,358,000 and 135,000 respectively.

**Shares To Be Issued** – As of December 31, 2010 and November 30, 2011, there were respectively 1,358,000 and 135,000 Common Shares classified as to be issued upon the exchange of the same number of OPEL Solar Exchangeable Shares, pursuant to an RTO agreement entered into in December 2005.

**Warrants** - As of December 31, 2010 and November 30, 2011, the Company had respectively 22,558,467 and 19,339,560 warrants outstanding for the purchase of common shares priced between CA\$0.30 and CA\$1.90. Some of these warrants were priced and exercisable in Canadian dollars. Complete particulars can be found in Note 13 of our Consolidated Financial Statements for the year-ended December 31, 2010 which are available for download at [www.sedar.com](http://www.sedar.com).

**Stock Options** - As of December 31, 2010 and November 30, 2011, a total of 11,102,500 and 9,590,250 outstanding options to purchase common shares were respectively exercisable between CA\$0.13 and CA\$1.50 per common share. Some of these options were priced and exercisable in Canadian dollars. Complete particulars can be found in Note 14 of our Consolidated Financial Statements for the year-ended December 31, 2010 which are available for download at [www.sedar.com](http://www.sedar.com).

### ***Material Characteristics of Securities***

#### **a) Common Shares**

Each Common Share entitles the holder thereof to dividends if, as and when declared by the directors, to one vote at all meetings of shareholders, and to participate ratably in any distribution of assets of the Company upon liquidation, dissolution, or winding-up, subject to the prior rights of holders of shares ranking in priority to the Common Shares.

#### **b) Special Voting Shares**

The Special Voting Share shall have attached thereto the following rights, privileges, restrictions and conditions:

**Dividends.** The holder of the Special Voting Share shall not be entitled to any dividends or other distributions in respect of such share.

**Liquidation, dissolution or winding-up.** In the event of the liquidation, dissolution or winding up of the Company or other distribution of the assets of the Company among its shareholders for the purpose of winding up its affairs, the holder of the Special Voting Share shall not be entitled to receive any assets, property or other amounts from the Company or otherwise.

**Voting rights.** The holder of the Special Voting Share shall be entitled to receive notice of and to attend and vote at any annual and special meetings of the shareholders of the Company and shall be entitled to that number of votes as is equal to the aggregate number of Common Shares that may be acquired upon exercise of the holder exchange rights attached to all outstanding shares of Exchangeable Common Stock of OPEL Inc. (the "Exchangeable Shares") as of the close of business on the record date for such meeting.

The holder of the Special Voting Share and the holders of the common shares of the Company shall vote together as a single class on all matters, except to the extent that voting as a separate class is required by applicable law.

**Redemption by Company.** The Special Voting Share shall be automatically redeemed by the Company, without the requirement to provide any prior notice to the holder of the Special Voting Share, immediately once no Exchangeable Shares, or rights or options to acquire Exchangeable Shares, remain outstanding (a "Redemption Event").

Following the occurrence of a Redemption Event, the Company shall pay to the holder of the Special Voting Share an amount equal to the stated capital attributable to the Special Voting Share as a class as shown on the books of the Company at the time of the Redemption Event, such amount being herein referred to as the "Redemption Price".

In the case of the redemption of the Special Voting Share, the Company shall, as soon as practicable following the Redemption Event, mail or otherwise provide to the holder of the Special Voting Share a notice in writing of the redemption of such Special Voting Share. Such notice shall be provided to such holder in such manner as may be determined by the Company; provided, however, that accidental failure to give any such notice shall not affect the validity of such redemption. Such notice shall set out the Redemption Price and the date (the "Redemption Date") on which the redemption is effective (being the date of occurrence of the Redemption Event). On or after the Redemption Date, the Company shall pay or cause to be paid to or to the order of the holder of the Special Voting Share so redeemed the Redemption Price on presentation and surrender to the Company of the certificate representing the Special Voting Share. Such payment shall be made by cheque payable at par at any branch of the Company's bankers in Canada. From and after the Redemption Date, the holder of the

Special Voting Share so redeemed shall cease to be entitled to exercise any of the rights of a holder of the Special Voting Share other than to claim payment of the Redemption Price. The Company shall have the right at any time after a Redemption Event to deposit the Redemption Price of the Special Voting Share to a special account in any chartered bank or in any trust company in Canada named in such notice, to be paid without interest to or to the order of the holder of such Special Voting Share upon presentation and surrender to such bank or trust company of the certificate representing the same, and the rights of the holder thereof shall be limited to receiving, without interest, the Redemption Price so deposited against presentation and surrender of the said certificate and any interest allowed on such deposit shall belong to the Company.

### **Additional Information**

Additional details regarding share data information is available our Consolidated Financial Statements for the year-ended December 31, 2010 which can be downloaded from [www.sedar.com](http://www.sedar.com).

## **MARKET FOR SECURITIES**

### **Trading Price and Volume**

The Common Shares of OPEL International Inc. are listed and posted for trading on the TSXV under the trading symbol "OPL". The following table sets forth the high and low trading prices and trading volumes for Common Shares during the months indicated, as reported by the TSXV.

<b>Year</b>	<b>Month</b>	<b>High</b>	<b>Low</b>	<b>Volume</b>
2010	January	0.335	0.255	728,996
	February	0.27	0.23	522,565
	March	0.30	0.23	1,686,560
	April	0.23	0.21	1,531,823
	May	0.24	0.185	752,299
	June	0.345	0.215	4,695,770
	July	0.41	0.295	3,036,346
	August	0.37	0.29	678,264
	September	0.41	0.305	1,876,477
	October	0.40	0.35	1,175,130
	November	0.38	0.275	2,236,455
	December	0.37	0.27	2,914,887
		0.41	0.185	21,835,572
2011	January	0.32	0.31	2,200,850
	February	0.38	0.30	1,624,831
	March	1.22	0.455	128,800,416
	April	1.81	0.87	50,529,423
	May	1.48	1.00	16,024,559
	June	1.21	0.73	13,856,551
	July	0.80	0.71	3,489,919
	August	0.91	0.59	6,033,508
	September	0.84	0.38	5,704,778
	October	0.55	0.355	3,187,492
	November	0.47	0.335	2,643,857
		1.81	0.30	234,096,184

## ESCROWED SECURITIES

There are no Escrowed Securities outstanding.

## DIRECTORS AND OFFICERS

### Name, Occupation and Security Holding

The following table and accompanying information below sets forth, for each director and executive officer of the Company the name and jurisdiction of residence of such director, the principal occupation of such director during the past five years and the period of time during which such director has served as a director of the Company. Directors of the Company are elected annually at our annual meeting of shareholders.

<i>Name, Jurisdiction of Residence and Position</i>	<i>Principal Occupation or employment and, if not a previously elected Director, occupation during the past 5 years</i>	<i>Date First Elected as a Director</i>	<i>Number of Securities beneficially owned, directly or indirectly, or controlled or directed</i> <sup>④</sup>
Tristram E. Collins ①②③ Brick, New Jersey, USA	President of Grassmere Acquisition Corporation since April 2011 and President & CEO of Great Point Holdings, LLC since November 2007; Director and Senior Managing Executive at Nassau Broadcasting Partners, L.P. from 2004 to September 2010.	June 21, 2011	Nil shares 275,000 options
Lawrence R. Kunkel ①②③ Warwick, Rhode Island, USA Director	Chairman and Managing Director of American Strategic Holdings, LLC since January 2005.	September 26, 2006 <sup>⑤</sup>	416,250 common shares 1,099,000 options
Dr. Samuel Peralta ①②③ Toronto, Ontario, Canada Director	President of Windrift Bay Limited since August 2011; Director of Business Development for Kinectrics Inc. since January 2000.	September 26, 2006 <sup>⑤</sup>	210,000 common shares 524,000 options
Leon M. Pierhal Campton, New Hampshire, USA President & CEO	President of ODIS Inc. since April 2008; President and Chief Operating Officer of OPEL from June 2003 to April 2008; Chairman and Chief Executive Officer of Pierhal & Associates LLC from September 1993 to March 2005.	September 26, 2006 <sup>⑤</sup>	554,000 common shares 1,875,000 options
Michael C McCoy Shelton, Connecticut, USA CFO and Treasurer	CFO and Treasurer of OPEL, Inc. since March 2006 and of the Company since January 2007; VP Controller and Corporate Secretary of Transwitch Corporation from May 1998 to December 2006.	N/A	112,000 common shares 938,000 options
Francisco Middleton Newtown, Connecticut, USA COO and VP, Marketing	VP Marketing of the OPEL, Inc. since March 2006 and of the Company since January 2007 and COO of the Company and OPEL Solar Inc.; VP Marketing of Transwitch Corporation from 1989 to February 2006.	N/A	349,995 common shares 738,000 options
Javier Berrios, Trumbull, Connecticut, USA VP, Engineering	VP Engineering of the Company and OPEL, Inc. since January 2008, and of Tego, Inc. from January 2006 to January 2008; Director Engineering of Transwitch Corporation from August 1999 to January 2006.	N/A	40,000 shares 320,000 options
Patricia V. Agudow Norwalk, Connecticut, USA VP Administration, Public & Government Relations	VP Administration, Public & Government Relations of the Company and OPEL, Inc. since November 2008; VP Human Resources of Transwitch Corporation from 1999 to October 2008.	N/A	Nil shares 275,000 options



<i>Name, Jurisdiction of Residence and Position</i>	<i>Principal Occupation or employment and, if not a previously elected Director, occupation during the past 5 years</i>	<i>Date First Elected as a Director</i>	<i>Number of Securities beneficially owned, directly or indirectly, or controlled or directed</i> ④
Michel J. Lafrance Scarborough, ON, Canada Secretary	Secretary of the Company since 1986; Secretary-Treasurer of VVC Exploration Corporation	N/A	96,300 shares 212,000 options

- ① Member of the Audit Committee.
- ② Member of Compensation Committee.
- ③ Member of Corporate Governance and Nominating Committee.
- ④ Shares beneficially owned, directly or indirectly, or over which control or direction is exercised, as at November 30, 2011, based upon information filed on SEDI by the individual Directors or furnished to the Company by them. Unless otherwise indicated, such shares are held directly.
- ⑤ Notwithstanding the date of election, the elected director took office on January 30, 2007, following the Continuance of the Company into New Brunswick as was contemplated at the time of election.

As at November 30, 2011, our directors and executive officers, as a group, beneficially own, or exercise control or direction over, directly or indirectly, 1,788,795 Common Shares representing approximately 1.91% of the Voting Securities. Our directors and executive officers are also entitled to receive, in the aggregate, 6,401,000 additional Common Shares upon the exercise of awards made to them pursuant to our current and former incentive stock option plans.

#### **Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

To our knowledge:

1. no director or executive officer of our company is, as at the date of this AIF, or was within 10 years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including our company), that:
  - a) was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or
  - b) was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer,
2. no director or executive officer of our company, or a shareholder holding a sufficient number of securities of our company to affect materially the control of our company
  - a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including our company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
  - b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

#### **Conflicts of Interest**

Our Code of Business Conduct and Ethics provides that all of our directors and officers must not only comply with applicable laws, rules and regulations but also must engage in and promote honest and ethical conduct and abide by the policies and procedures that govern the conduct of the business of the Company. Conflicts of interest and even the appearance of a conflict of interest may compromise the

reputation of the Company and must be avoided. Actual or potential conflicts of interest involving a director or executive officer should be disclosed directly to the Chairman of the Board.

We are not aware of any existing or potential material conflicts of interest between our company or a subsidiary of our company and any of our directors or officers.

## PROMOTERS

Other than Mr. Leon M. Pierhal who is deemed to be promoters by reason of his activities on behalf of the Company or a subsidiary of the Company, no person acted as a promoter of the Company during the two (2) most recently completed financial years.

### Summary Compensation Table

The following table sets forth all annual and long term compensation for services in all capacities to the Company for the three most recently completed financial years of the Company in respect of the Promoter of the Company.

NEO Name and Principal Position	Year	Salary (US\$)	Share-Based Awards <sup>(1)</sup> (US\$)	Options-Based Awards		Non-Equity Incentive Plan Compensation (US\$)		Pension Value (US\$)	All Other Compensation (US\$)	Total Compensation (US\$)
				No. of Shares	(US\$)	Annual Incentive Plans <sup>(3)</sup>	Long-term Incentive Plans			
Leon M. Pierhal <sup>(2)</sup> President & CEO	2011	220,000	N/A	775,000	513,031	Nil <sup>(4)</sup>	Nil	Nil	Nil	733,031
	2010	220,937	N/A	875,000	222,883	Nil	Nil	Nil	Nil	443,820
	2009	210,000	N/A	100,000	12,942	17,500	Nil	Nil	Nil	240,442
	2008	208,333	N/A	Nil	Nil	13,284	Nil	Nil	Nil	221,617

#### NOTES:

- (1) The Company used the Black-Scholes model as the methodology to calculate the grant date fair value, and relied on the following key assumptions and estimates for each calculation for 2007: weighted average risk-free interest rate of 4.74%, weighted average dividend yield of 0%, weighted average volatility of 80% and weighted average estimated life of 5 years. The Company chose this methodology because it is the industry standard. The exchange rate used in these calculations to convert CAD to USD was the rate as at the end of each applicable year, being 0.9935 for 2011, 1.002 for 2010 and 0.9494 for 2009.
- (2) Also serves a director of the Company, but receives no additional compensation for services as a director.
- (3) These bonuses were paid in the first 3 months following the year of the measure of performance.
- (4) The bonus for 2011, if any, will be determined in the first quarter of 2012.

Mr. Pierhal has an employment contract dated January 1, 2006 for a period of 3 years, with automatic yearly renewals and providing a current annual salary of US\$ 240,000. This employment contract provide for a severance as described below and also provide for an "Assignment of Inventions" which assigns inventions to OPEL and includes covenants against disclosure, competition and solicitation. The agreement currently provides for a severance of one year on termination of employment.

On successful completion of the sale of the POET technology and/or the ODIS Division, Mr. Pierhal will be entitled to receive a bonus equal to 0.3% of the net proceeds.

### Incentive Plan Awards

#### (i) Outstanding Share-Based Awards and option-Based Awards

The following table sets forth information concerning all awards currently outstanding under the Stock Option Plan of the Company pursuant to which compensation that depends on achieving certain performance goals or similar conditions within a specified period, granted to the Promoter:

Name	Option-Based Awards					Share-Based Awards	
	No. of Shares Underlying Unexercised Options (#)	Option Exercise Price (US\$/share)	Option Expiration Date	Value of Unexercised In-The Money Options as at <sup>①</sup> (US\$)		Number of Shares or Units of Shares That Have Not Vested (#)	Market or Payout Value of Share-Based Awards That Have Not Vested (US\$)
				December 31, 2011	November 30, 2011		
Leon M. Pierhal	125,000	CA\$ 0.95	Sep. 21, 2012	Nil	Nil	N/A	N/A
	100,000	CA\$ 0.16	Feb. 13, 2014	16,533	21,107	N/A	N/A
	75,000	CA\$ 0.28	Mar. 17, 2020	3,385	6,995	N/A	N/A
	800,000	CA\$ 0.345	Aug. 19, 2020	Nil	23,561	N/A	N/A
	75,000	CA\$ 0.76	Feb. 28, 2021	Nil	Nil	N/A	N/A
	200,000	CA\$ 1.21	May 11, 2021	Nil	Nil	N/A	N/A
	500,000	CA\$ 0.51	Sep. 28, 2021	Nil	Nil	N/A	N/A

① This amount is calculated based on the difference between the current market value of the shares underlying the options and the exercise or base price of the option.

(ii) *Outstanding Share-Based Awards and option-Based Awards*

The value vested or earned during the last 3 completed financial years of incentive plan awards granted to the Promoter are as follows:

Name	Year End	Option-Based Awards - Value Vested During The Applicable Year <sup>(1)</sup> (US\$)	Share-Based Awards - Value Vested During The Applicable Year <sup>(2)</sup> (US\$)	Non-Equity Incentive Plan Compensation - Value Earned During The Applicable Year (US\$)
Leon M. Pierhal	2011	118,418	N/A	Unknown <sup>(3)</sup>
	2010	8,486	N/A	Nil
	2009	5,459	N/A	17,500
	2008	5,081	N/A	13,284

(1) This amount is the dollar value that would have been realized computed by obtaining the difference between the market price of the underlying securities on the vesting date and the exercise or base price of the options under the option-based award. To have realized this value, the optionee would have had to exercise their options and sell the shares on the day of vesting.

(2) This amount is the dollar value realized computed by multiplying the number of shares or units by the market value of the underlying shares on the vesting date.

(3) The bonus for 2011, if any, will be determined in the first quarter of 2012.

## LEGAL PROCEEDINGS AND REGULATORY ACTIONS

### Legal Proceedings

We were not party to any legal proceeding since the beginning of the last completed financial year and are not aware of any contemplated legal proceedings.

### Regulatory Actions

During our financial year, no penalties or sanctions were imposed against us by a court relating to securities legislation or by a securities regulatory authority during our financial year, no other penalties or sanctions imposed by a court or regulatory body against us that would likely be considered important to a reasonable investor in making an investment decision, and no settlement agreements were entered into by us before a court relating to securities legislation or with a securities regulatory authority.

## **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

No person who has been a director or executive officer of the Company at any time since the beginning of our last financial year, no person or company that beneficially owns, controls or directs, directly or indirectly, more than 10% of any class or series of our voting, and no associate or affiliate of the foregoing persons, has had any material interest, direct or indirect, by way of beneficial ownership or otherwise, in any material transactions which have occurred during the three (3) most recently completed financial years or during the current financial year.

## **TRANSFER AGENTS AND REGISTRARS**

The transfer agent and registrar for our Common Shares is Equity Transfer & Trust Company, 200 University Avenue, Suite 400, Toronto, Ontario, Canada M5H 4H1.

The transfer agent and registrar for our Warrants is Capital Transfer Agency, Suite 1101, 105 Adelaide St. West, Toronto, Ontario M5H 1P9.

## **MATERIAL CONTRACTS**

Other than contracts eligible for the ordinary course of business filing exemption, no material contracts were entered into by the Company in the year ended December 31, 2009 or on or before December 31, 2008 which remain in effect except as follows:

- A long term purchase agreement dated March 8, 2010 was entered into with Boeing Spectrolab for the purchase of their high concentration multi-junction solar cells. These cells are a key component in the production of our HCPV panels. This agreement is for five years and is renewable.
- Joint Venture Agreement between OPEL Solar, Inc. (a U.S. company) and Ecotech Environmental Technology Ltd (“Ecotech”) (a Hong Kong company) dated December 30, 2010. The agreement allows OPEL to enter East Asia and develop the HCPV market into what has been deemed the fastest growing solar market in the world. OPEL is a 19% partner in this joint venture.
- Loan and Security Agreement dated November 21, 2011 was entered into with Silicon Valley Bank in Massachusetts, whereby the Company secured a US\$ 5 million Line of Credit against its receivables.

## **EXPERTS**

### **Names of Experts**

Marcum LLP, have been the auditors of the Company since April 19, 2010 and are independent in accordance with the auditor’s Rules of Professional Conduct in Canada.

Prior to April 19, 2010, UHY LLP were the auditors of the Company and were independent in accordance with the auditor’s Rules of Professional Conduct in Canada.

Prior to June 17, 2009, Smith Nixon LLP were the auditors of the Company and were independent in accordance with the auditor’s Rules of Professional Conduct in Canada.

### **Interests of Experts**

To our knowledge, there are no registered or beneficial interests, direct or indirect, in any securities or other property of our company or of one of our associates or affiliates held or to be received by any of our experts or designated professionals of our experts.

## **ADDITIONAL INFORMATION**

Additional information relating to the Company has been filed with the securities regulatory authorities in Canada and may be accessed at on SEDAR at [www.sedar.com](http://www.sedar.com).

Additional information with respect to the Company, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, and securities authorized for issuance under equity compensation plans, if applicable, is contained in the Company's management information circular for its most recent annual meeting of shareholders held on June 21, 2011 which circular was filed on SEDAR on May 27, 2011. Additional financial information is provided in our audited consolidated comparative financial statements and the notes thereto and related management's discussion and analysis for the most recently completed financial year ended December 31, 2010 which were filed on SEDAR on April 18, 2011 and in the unaudited consolidated comparative financial statements and the notes thereto and related management's discussion and analysis for the quarterly periods ended March 31, 2011, June 30, 2011 and September 30, 2011 which were filed on SEDAR on June 7, August 24 and November 28 respectively.

## AUDIT COMMITTEE

### a) The Audit Committee's Charter

The current Audit Committee Charter was put in place on December 14, 2007. A copy of the current Charter can be found in Schedule "A".

### b) Composition of the Audit Committee

The following are the members of the Committee:

<u>Name</u>	<u>Independent / Not independent</u> ①	<u>Financially literate / Not Financially literate</u> ①
Tristram Collins	Independent	Financially literate
Samuel Peralta	Independent	Financially literate
Lawrence R. Kunkel	Independent	Financially literate

① As defined by National Instrument 52-110 ("NI 52-110").

### c) Relevant Education and Experience

The education and experience of each Audit Committee member that is relevant to the performance of his responsibilities are as follows:

Lawrence R. Kunkel, holds an A.B. Degree with Honors in Economics and A.M. in Social Science (Economics). He is Chief Financial Officer of Modular Thermal Technologies, Inc and American Strategic Holdings, LLC. Over the past 25 years, he has been the Chief Economist and Director of Corporate Strategy for the Federal Home Loan Bank of Chicago, New York Life Insurance Company and Ryan Edwards Global Strategic Advisors. He has 13 academic and professional publications to his credit in the areas of economics, law and economics, and corporate strategy. During his career, he has been involved in over 150 mergers and acquisitions.

Tristram E. Collins, the Chairman of the Audit Committee, holds an A.B. from Dartmouth College and an M.B.A. from the Tuck School of Business at Dartmouth. He has over 25 years of M&A, financing, investment and operating experience. He is the Chief Executive Officer of Great Point Holdings, LLC, a venture capital and financial advisory firm, President of Grassmere Acquisition Corporation and serves as a director and Chief Financial Officer of AcuStream, LLC and Sustainable Building Innovations, Inc. He formerly served as a senior executive of operations and finance at the 15th largest radio company in the US. He executed over \$85 billion in capital markets transaction or advisory assignments as an investment banker, served as a managing director and sector head in investment banking at Citigroup and was in investment banking at Merrill Lynch & Co., Smith Barney, Inc. and PaineWebber.

Samuel Peralta holds a Ph.D. and a Certificate in Accounting from Edinburg Business School, UK which was complemented by management, accounting and financial studies at York University (Schulich School of Business) and University of Toronto (Rotman School of Management). He has

been a senior officer and director of several public companies. He worked for Ontario Hydro and Kinectrics Inc., where he had responsibility for Profit & Loss, capital investment and other financial-related matters.

All members have an understanding of the accounting principles used by the Company to prepare its financial statements and have an understanding of its internal controls and procedures for financial reporting.

**d) Audit Committee Oversight**

At no time since the commencement of the Company's most recently completed financial year was a recommendation of the Committee to nominate or compensate an external auditor not adopted by the Board of Directors.

**e) Reliance on Certain Exemptions**

At no time since the commencement of the Company's most recently completed financial year has the Company relied on the exemption in Section 2.4 of NI 52-110 (*De Minimis Non-audit Services*), or an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52-110.

**f) Pre-Approval Policies and Procedures**

The Committee has adopted specific policies and procedures for the engagement of non-audit services as described above in paragraph 7 (e) of the Audit Committee Charter.

**g) External Auditors Service Fees (By Category)**

The aggregate fees billed by the Company's external auditors for each of the last two fiscal years for audit fees are as follows:

<i>Financial Year Ending</i>	<i>Audit Fees</i>	<i>Audit Related Fees</i>	<i>Tax Fees</i>	<i>All Other Fees</i>
December 31, 2009 <sup>(1)</sup>	\$ 67,000	\$ 9,000	\$ 28,000	\$ 28,300
December 31, 2010 <sup>(1)</sup>	\$ 68,000	\$ 27,000	\$ 30,975	Nil

(1) The above fees also include the fees relating to our subsidiaries, except for Tax Fees which only cover our subsidiaries in the US.

**SCHEDULE A – Audit Committee Charter****OPEL INTERNATIONAL INC.  
(now OPEL TECHNOLOGIES INC.)****THE AUDIT COMMITTEE CHARTER**1. Composition

The Audit Committee (the “AC”) comprises three (3) or more directors as determined by the Board, each of whom shall be unrelated non-executive directors, free from any relationship that would interfere with the exercise of his or her independent judgment. The Board shall appoint one of the members of the AC as chairperson. Such appointment will be for a one (1) year term and will be ratified by the full Board. Each AC member must be, or must become, within a reasonable period of time after appointment, "financially literate," which qualification shall be determined by the Board. In addition, at least one (1) AC member shall have accounting or related financial management background/experience.

2. Authority

The AC may, at its own initiative or at the request of the Board, investigate any activity of the Company. All employees are directed to co-operate as requested by members of the AC. The AC is empowered to retain persons having special competence as necessary to assist the committee in fulfilling its responsibility.

3. Responsibility

The AC is to serve as a focal point for communication between non-committee directors, the independent (external) auditors and the Company’s Management Team as their duties relate to financial accounting, reporting, and controls. The AC is to assist the Board in fulfilling its fiduciary responsibilities as to accounting policies and reporting practices of the Company and all subsidiaries, and the sufficiency of auditing relative thereto. The AC is the Board’s principal agent in assuring the independence of the Company’s independent auditors, the integrity of financial management, and the adequacy of financial disclosures to shareholders. However, the opportunity for the independent auditors to meet with individual directors or the entire Board, as needed, is not to be restricted.

The Company’s independent (external) auditors are ultimately accountable to the AC and the Board. The AC and the Board have the ultimate authority and responsibility to select, evaluate, and nominate the independent (external) auditor to be proposed for any shareholder approval; and where appropriate, to replace the Company’s independent (external) auditors.

4. Meetings

The AC is to meet at least four (4) times per fiscal year or as many additional times as the committee deems necessary.

5. Attendance

A majority of the members of the AC must be present at all committee meetings and every effort should be made to hold meetings with all members present. As necessary or desirable, the chairperson may request that members of the Company’s Management Team and representatives of the independent (external) auditors be present at meetings of the committee.

6. Minutes

Minutes of each AC meeting are to be prepared summarizing the matters discussed.

7. Specific Mandate/Duties

- a) Inform the independent (external) auditors and Management Team that the independent (external) auditors and the members of the AC may communicate with each other at any time.
- b) Review with the CEO, CFO and independent (external) auditors, the Company’s policies and procedures to reasonably assure the adequacy of internal accounting and financial reporting controls.
- c) Have familiarity with the accounting and reporting principles and practices applied by the Company in preparing its financial statements and make, or cause to be made, all necessary inquiries of the

Management Team and the independent (external) auditors concerning established standards of corporate conduct and performance and any deviations therefrom.

- d) Review, prior to the annual audit, the scope and general extent of the independent (external) auditor's audit examinations. The auditors' fees are to be arranged with the Management Team and annually summarized for the AC's review and approval.
- e) Review with the Company's Management Team the extent of non-audit services planned to be provided by the independent (external) auditors in relation to the objectivity needed in the audit.
- f) Review with the Company's Management Team and the independent (external) auditors, upon completion of their audit, financial results and MD&A at year end, together with any related press releases, prior to filing or distribution.
- g) Evaluate the cooperation received by the independent (external) auditors during their audit examination, including their access to all requested records, data and information, and also inquire of the independent (external) auditors whether there have been any disagreements with the Company's Management Team, which if not satisfactorily resolved would have caused the independent auditors to issue a non-standard report on the Company's financial statements. Elicit the comments of the Management Team regarding the responsiveness of the independent auditors to the Company's needs.
- h) Recommend to the Board whether, based on the reviews and discussions referred to above, the annual financial statements and any related MD&A should be included in the Company's Annual Report filed on SEDAR, distributed to shareholders and otherwise released.
- i) Review with the Company's Management Team and the independent (external) auditors (if required or determined necessary by the AC), interim financial results and MD&A, together with any related press releases, prior to filing or distribution.
- j) Recommend to the Board whether, based on the reviews and discussions referred to above, the interim financial statements and any related MD&A should be filed on SEDAR, distributed to shareholders and otherwise released.
- k) Discuss with the independent (external) auditors and the Company's Management Team the quality of the Company's financial and accounting personnel and any relevant recommendations the independent auditors (external) may have.
- l) Discuss any significant changes to the Company's accounting principles and any items required to be communicated to the independent (external) auditors.
- m) Review and reassess the adequacy of the AC's Charter at least annually and submit this same to the Board for approval.
- n) Ensure that the independent (external) auditors submit, on a periodic basis to the AC, a formal written statement delineating all relationships between the independent auditors and the Company, actively engage in a dialogue with the independent auditors with respect to any disclosed relationships or services that may impact the objectivity and independence of the independent auditors, and recommend that the Board take appropriate action in response to the independent auditors' report to satisfy itself of the auditors' independence.
- o) Recommend to the Board the retention or replacement of the independent auditors.
- p) Review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former independent (external) auditors of the Company.
- q) Apprise the Board, as necessary, through minutes and special presentations of significant developments in the course of performing the above duties.
- r) Approve capital expenditures at levels up to the maximum amount of the AC's authority as determined by the Board from time to time. Any decisions made by the AC will be reported to the full Board and ratified at its next meeting.
- s) Recommend to the Board any appropriate extensions or changes in the duties of the AC.
- t) Establish and monitor procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or audit matters and the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters. The AC shall review periodically with the Company's Management Team these procedures and any significant complaints received.