

# OPEL TECHNOLOGIES INC.

Management's Discussion and Analysis Year ended December 31, 2012

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## **OPEL Technologies Inc.**

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## MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED DECEMBER 31, 2012

The following discussion and analysis of the operations, results, and financial position of OPEL Technologies Inc., ("OPEL" or the "Company") for the year ended December 31, 2012 (the "Period") should be read in conjunction with the Company's December 31, 2012 audited consolidated financial statements and the related notes thereto where applicable both of which were prepared in accordance with International Financial Reporting Standards ("IFRS"). The effective date of this report is March 28, 2013. All financial figures are in United States dollars ("USD") unless otherwise indicated.

## Forward-Looking Statements

This management discussion and analysis contains forward-looking statements that involve risks and uncertainties. It uses words such as "may", "would", "could", "will", "likely", "except", "anticipate", "believe", "intend", "plan", "forecast", "project", "estimate", and other similar expressions to identify forward-looking statements. Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation, risks and uncertainties relating to the early stage of the Company's development and the possibility that future development of the Company's technology and business will not be consistent with management's expectations, difficulties in achieving commercial production or interruptions in such production if achieved, the inherent uncertainty of cost estimates and the potential for unexpected costs and expenses, the uncertainty of profitability and failure to obtain adequate financing on a timely basis. The Company undertakes no obligation to update forward-looking statements if circumstances or Management's estimates or opinions should change, except to the extent required by law. The reader is cautioned not to place undue reliance on forward-looking statements.

## **Business Overview**

Today's semiconductor world is rapidly growing. The world has become increasingly dependent on electronics for functioning day-to-day. As that dependency grows, so does the need for smaller, faster and more power efficient devices. Silicon-based semiconductor technology has been pushed to its limits. In an effort to keep up with the demand, resulting in technology leaders committing an average 15% of their \$167 billion in revenues to R&D efforts as reported by IC Insights.

OPEL has developed a unique, proprietary process that addresses the needs of speed, size, energy and cost efficiency associated with the current silicon-based technology along with the hurdles of expanding silicon-based chip technology to fit the needs of product developers.

OPEL is incorporated under the laws of the Province of Ontario. The Company has 32 patents issued and 6 patents pending primarily for its semiconductor Planar Opto-Electronic Technology ("POET") process, currently being developed by ODIS. Through its US subsidiary ODIS Inc. ("ODIS"), the Company is engaged in the designing of III-V semiconductor devices and processes for military, industrial and commercial applications, including infrared sensor arrays and ultra-low-power random access memory. The POET platform 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, through its wholly owned US subsidiary, OPEL Solar Inc ("OSI"), previously manufactured and deployed both dual and single-axis trackers designed for solar energy applications worldwide. All solar activities ceased as of June 15, 2012 after a strategic decision was made to focus its efforts on monetizing POET. The Company has sold the majority of its solar assets; however, it may continue to earn minor revenue and incur comparatively small expenses relating to its solar installations currently generating electricity.

As of June 2012, OPEL restructured its Board of Directors. The new Board made two strategic decisions to strengthen the Company going forward. The first was to discontinue and divest its solar business and the second was to focus all efforts on ODIS' break-through POET Platform for advanced semiconductor applications. This MD&A presents the effects of the pivotal decision to discontinue the operations of OPEL's solar business.

The Company's shares trade under the symbol "OPL" on the TSX Venture Exchange in Canada and under the symbol "OPELF" on the OTCQX in the US.

#### a) Semiconductor Technology

OPEL, through ODIS, is currently conducting research and development (R&D) for a wide array of devices for potential 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' 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' POET process, infrared sensing technology, sensor/laser development and the combination of electronic circuits and lasers on the same microchip. ODIS remains active in this area with projects underway with the U.S. Department of Defense and a major U.S. Defense Contractor. The work conducted with military applications will not limit the Company's ability to monetize POET.

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. By June 2011, ODIS, under the supervision of Dr. Geoffrey Taylor, had completed several wafers containing multiple devices produced with POET Technology. In August 2011, BAE Systems ran a fabrication lot of five wafers using POET Technology. Chips were produced from these wafers and tested to further validate the varied capabilities and devices developed utilizing the POET Technology platform. ODIS has made significant progress regarding POET as it pertains to its advancements in Optical Interconnection of High Speed Circuits, making it possible for the first time to implement an optical interface as a single chip to connect existing CMOS processors as described in the POET White Paper/Roadmap posted on the ODIS website <a href="https://www.odisinc.com">www.odisinc.com</a>. Dr. Taylor's continued development strides led to OPEL Technologies hosting its 2012 Annual General Meeting on the campus of the University of Connecticut (UCONN), home of the ODIS R&D facility where, at the conclusion of the Annual General Meeting, guided tours of the ODIS R&D facility were conducted by Dr. Taylor and his staff. ODIS and BAE Systems continue on the path of producing a much sought after Infrared Detector (IR) Device contracted for by the U.S. Air Force Research Laboratory, (AFRL).

In 2011, all U.S. Government contractors, including ODIS, were notified that funding to continue ongoing projects would see dramatic cuts throughout 2011 and possible termination in 2012. ODIS began experiencing such cutbacks in financial support to projects throughout 2011, including the very important BAE project which by the end of the year was no longer funded. Recognizing the importance this development effort has to the overall future of ODIS, funds were redirected to continue this project while alternative sources of funding were being sought. In April of 2012, ODIS received a Phase II award of \$750,000 from NASA to continue developing radiofrequency (RF) and optical phased arrays using the POET platform, and work began under this award during Q3 2012.

OPEL's long term objective, when the POET platform is completed by ODIS, is to explore opportunities to monetize this breakthrough technology.

#### b) Solar Business

Prior to June 2012, the mission of OSI was to develop and supply innovative solar product solutions to harness electricity from the sun in the most efficient and cost effective manner.

Recently, global debt figures surged upward and subsidies for new energy technologies were trimmed; this, coupled with massive solar product inventory in the marketplace, has led to ever-decreasing margins within the solar industry. Recognizing this transformation was occurring, aggressive cost cutting measures were immediately enacted during 2011 which continued into 2012; as well, OSI was redirected from being a Concentrated Solar Photovoltaic (CPV) panel provider into a solar tracker provider. Leveraging from OPEL Solar's leadership position in the tracker market, in June 2012, a Special Committee of the Board was established to explore the divesture of the OPEL Solar Division. This led to the sale of a significant portion of the assets of the solar tracker business in December 2012. The Company is in the process of selling the remaining assets.

## **Industry Outlook**

The semiconductor market is projected to grow to \$430 billion by 2015 and remains a rapidly growing segment of our society. Electronics sales topping \$1,200 billion all require semiconductors to achieve success and competitive performance. New and more integrated technologies and devices have been the biggest driver to this market growth.

Opel's POET technology is applicable in a large portion of this semiconductor market as it represents, possibly, the most comprehensive solution to increasing semiconductor performance in an economical and functional manner. In

the short term, POET's current development efforts may allow future licensees to address weaknesses in the following markets (market sizes projected for 2015):

- Optical Semiconductor projected \$37.4 billion
- Sensors and actuators projected \$14.1 billion
- Analog ICs projected \$55.9 billion
- Discrete semiconductors projected \$28.6 billion

With further development, POET can potentially address other market areas such as:

- Logic projected \$115 billion
- MPUs and MCUs projected \$92.6 billion
- Memories projected \$86.6 billion

Source: Gartner, PWC

Business indicators suggest that POET may provide significant value to the ever growing market, where it addresses a need for power consumption, speed, size and cost efficiency.

As reported throughout the year, OPEL's strategy is to continue, aggressive research and development efforts planned by ODIS as it relates to the completion of the POET platform. Upon completion, POET is expected to allow ODIS to fundamentally alter the landscape of computing for a broad range of applications by offering components with dramatically lowered cost together with increased speed, density, and reliability.

Since the beginning of its development, the recognition of the breakthrough potential provided by the POET technology within the military community remains strong. Even through a downturn in military spending during 2011, *POET remained at the forefront of those projects earmarked for funding during 2012 and 2013*. This military development work will not constrain the commercial application of the POET Technology.

Recent technological strides within the POET development program have proven encouraging. The fact that the 2012 Annual General Meeting took place on the campus of the University of Connecticut, home of the ODIS research and development facility testifies to OPEL's redirection. As we showcased ODIS' achievements thus far, we are continuing to work toward our goal of the monetization of POET for the shareholders.

## Key Success Drivers ("KSD")

ODIS continued to develop its enhancements to the POET platform during 2011 and continued to do so into 2012. POET is a semiconductor fabrication process that enables the monolithic fabrication of integrated circuits containing both electronic and optical elements. The POET platform, which is covered by numerous patents and patents pending, makes possible the economic production of fully-integrated optoelectronic semiconductor devices with higher speeds and reduced power consumption compared to conventional silicon-based devices. Utilizing POET, 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.

The Company's success in 2012 was driven by its ability to achieve significant milestones in cost control, liquidity and technical progress, which in turn led to a recovery in market value of its share price from 2011. The Company's future success will also be driven by focusing on the same factors, as well as critical human capital.

Relieving itself of underperforming assets and establishing a lean operational model will allow the Company the necessary resources to focus on its key strategy – developing and monetizing its state-of-the-art POET process.

## Significant Events and Milestones During 2012

OPEL continued to make progress in 2012. Following are some significant events in the growth and development of the Company which add to the foundation for the achievement of the Company's future success:

1) In March 2012, ODIS announced significant progress, made during the first quarter, regarding POET as it pertains to its advancements in Optical Interconnection of High Speed Circuits as outlined in a White Paper/Roadmap posted on the ODIS website <a href="https://www.odisinc.com">www.odisinc.com</a>. These achievements make it possible for the first time to implement an on-chip optical interface as a single chip to connect existing complementary metal

- oxide semiconductor (CMOS) processors. The advancements are significant and ongoing steps in the POET technology development and have made it possible to produce a well-defined military and commercial Roadmap for POET.
- 2) In April 2012, ODIS officially received a Phase II award of \$750,000 from National Aeronautics and Space Administration ("NASA"). This is a continuation of previous successful work done for NASA using the POET platform to develop RF/Optical phased arrays. ODIS technology will allow NASA to utilize both optical and RF functions on the same sensors.
- 3) On May 16, 2012, OPEL's shares began trading on the OTCQX International trading system in the United States under the symbol "OPELF" in order to provide greater exposure and liquidity for the Company's shares in the Unites States without the added regulatory expenses and to benefit our shareholders.
- 4) In June 2012, the Board of Directors of OPEL was restructured, resulting in the departure of Messrs. Lawrence Kunkel and Tristram Collins, the addition of Messrs. Mark Benadiba and Peter Copetti and the return of Dr. Samuel Peralta.
- 5) In June 2012, OPEL made a core strategic directional change to exit the solar industry and to focus on its ODIS Division towards completion of the POET Platform. The Company made significant changes to its business model to successfully achieve a goal of monetizing POET in an optimum time frame.
- 6) At the Annual General Meeting of Shareholders (the "AGM") held on August 21, 2012, Chris Tsiofas was elected as a new member of the Board of Directors and was subsequently appointed as the Chairman of the Audit Committee.
- 7) Immediately following the AGM held in Storrs, CT, Shareholders were invited to tour the ODIS lab facility. Guests saw several demonstrations of the ODIS POET Technology and spoke to the ODIS development team.
- 8) As part of the focus, from June to September 2012, the Company raised approximately \$5.6 million through various private placements financings along with warrant and option exercises. The Company paid \$506,000 in share issue costs to raise these funds. Through these efforts the Company re-secured ownership of its intellectual property assets, established financial liquidity, and secured the working capital needed to further its pivotal strategy.
- 9) By December 4, 2012, the Company successfully fabricated the first Vertical Cavity Laser, utilizing ODIS' patented POET GaAs III-V technology. Incremental progress over the years has led to what many consider to be the next phase of semiconductor development which is to surpass the capabilities of complementary metal oxide semiconductor (CMOS) technology for the next generation of high speed low power applications. The new laser serves as the basis for chip-to-chip interconnection, and complements numerous other optoelectronic devices already demonstrated by ODIS including heterostructure field effect transistors (HFETs), optical thyristors, pulsed lasers, and super-radiant light emitting devices all able to be monolithically fabricated via the POET process.

#### Summary of Quarterly Results

Following are the highlights of financial data of the Company for the most recently completed eight quarters which have been derived from the Company's financial statements prepared in accordance with IFRS. All amounts herein are expressed in United States dollars unless otherwise indicated:

		Dec. 31/12		Sep. 30/12		Jun. 30/12		Mar. 31/12		Dec. 31/11	Sep. 30/11		Jun. 30/11		Mar. 31/11
Sales	\$	126,736	\$	112,070	\$	-	\$	-	\$	7,630	\$ 93,316	\$	316,696	\$	337,780
Cost of goods sold		-		-		-		-		-	-		-		-
Research and development		265,146		240,494		233,850		289,764		338,018	305,349		338,032		345,658
Depreciation, amortization		1,838		3,258		1,131		1,131		1,089	1,131		1,069		1,069
Professional fees		32,001		17,650		70,931		54,750		20,375	88,690		23,875		21,683
Stock-based compensation		651,317		379,243		309,069		364,397		439,000	593,864		462,999		307,149
General and administrative		404,654		297,854		342,968		160,312		188,180	189,827		179,021		194,760
Investment income and other income		-		-		-		-		(1,812)	(5,312)		(11,747)		(3,044)
Discontinued operations (income) loss		210,754		(382,666)		3,480,717		1,376,644		6,645,439	2,334,914		1,437,862	1	,480,010
Net loss	(\$	1,438,974)	(	\$ 443,763)	(\$	4,438,666)	(\$	2,246,998)	(:	\$7,622,658)	(\$3,415,148)	(\$	\$ 2,114,415)	(\$ 2	2,009,505)

## **Explanation of Quarterly Results**

During the quarter ended December 31, 2012, the Company's loss of \$1,438,974 as compared to a loss of \$7,622,658 in the same period in 2011. The 2012 loss from discontinued operations was \$210,754 compared to a loss of \$6,645,439 in the prior year.

Fourth quarter revenue was \$126,736 compared to \$7,630 in 2011. With the discontinuance of the solar division, OPEL's revenue is now derived primarily from government or military contracts in ODIS. Although the Government has limited its government contracts, the stronger revenues earned in the quarter, compared the same time in 2011 is a strong indicator of the level of confidence in the POET process. This revenue was associated with one Small Business Innovation Research (SBIR) grant funding ODIS' development activities for the U.S. Government. This billing was associated with a new grant from NASA that began in July 2012.

Fourth quarter R&D costs were lower than 2011 by 22% contracting from \$338,018 to \$265,146. The reduction in R&D costs is not an indicator of reduced efforts but rather evidence of the Company becoming leaner and directing all its efforts into monetizing POET. Management has a mandate to continue to develop the POET process. Objectives in 2013 are directly related to managing R&D expenses while reaching milestones and achieving objectives.

Fourth quarter general and administrative expenses have increased by \$253,762 from \$150,892 in 2011 to \$404,654 in 2012. This increase is due to additional corporate level management, restructuring, and the multiple financings. The Company also incurred additional operational costs resulting from the impact of Hurricane Sandy.

## **Explanation of Annual Results**

During the year ended December 31, 2012, the Company made a strategic decision to discontinue the solar division. The solar division was experiencing ongoing losses and consuming assets that were not being recovered. After careful review and analysis, the Board provided clear directive to restructure the Company which included identifying and discontinuing redundant positions, selling solar related assets, divesting itself of solar related minority interests and discontinuing the solar division. The Company had a loss from discontinued operations of \$4,685,449 compared to \$11,898,225 in 2011. The loss from discontinued operations included an inventory write down of \$1,143,011 (2011 - \$3,570,406), impairment of long lived assets of \$414,570 (2011 - \$1,501,692), uncollectible accounts receivable of \$195,774 (2011 - nil) and a write down of prepaid expenses of \$127,602 (2011 - nil).

As mentioned above, included in the loss from discontinued operations is a loss incurred in divesting investments in other companies namely Opel Solar Asia Company Limited of \$197,178.

During the year, the Company had a loss from continuing operations of \$3,882,952 compared to \$3,263,501 in 2011. Year over year, revenue contracted by 68% from \$755,422 in 2011 to \$238,806 in 2012. The significant downturn is a result of cutbacks in the SBIR grants funding ODIS' development activities for the U.S. Government. The only billings this year is associated with a new grant from NASA that began in July 2012 and will continue into 2013.

OPEL decreased its R&D expenses by 22% or \$297,803 from \$1,327,057 in 2011 to \$1,029,254 in 2012. The reduction was a result of reduced subcontracting activities, leaner operations and R&D activities focused only on the goal of monetizing POET in the short-term.

OPEL's general and administrative expenses have increased by \$378,723 from \$2,713,781 in 2011 to \$3,092,504 in 2012. This increase is due to additional corporate level management and some one-time corporate listing and regulatory fees from the TSX and Equity Transfer associated with our restructuring, multiple financings closed in the year and fees associated with securing a revolving line of credit. Additionally, the Company was obligated to pay severance packages to employees who were considered redundant as the Company was discontinuing of its solar operations.

## **Discontinued Operations**

On June 11, 2012, management committed to a plan to discontinue its solar related operations and to dispose of its solar related assets and liabilities. The decision was taken in line with the Company's strategy to focus on the Company's key competencies, being the development of the POET platform, which enables the monolithic fabrication 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. Consequently, all saleable assets and liabilities relating to the solar operations were classified as "assets available for sale" or "disposal group liabilities".

On December 12, 2012, the Company sold a portion of its assets available for sale to an arms length party. The sale resulted in the Company receiving \$1,000,000 for those assets available for sale. No gain or loss was recorded on the sale of the assets as current accounting standards mandate that assets are evaluated for impairment prior to discontinued operations treatment.

The remaining carrying amount of assets and liabilities allocated as "assets available for sale" and "disposal group liabilities" may be analysed as follows:

Solar installations	\$ 606,413
Assets available for sale	\$ 606,413
Deferred energy credit Asset retirement obligation	\$ 526,518 79,895
Disposal group liabilities	\$ 606,413

Until the assets are sold, the Company may continue to earn some revenue along with incurring some minor expenses relating to its former solar business.

Revenue and expenses, and gains and losses relating to the discontinued activity have been removed from the results of continuing operations and are shown as a single line item on the face of the consolidated statement of comprehensive loss. The operating results of the discontinued operations can be analyzed as follows:

	Decemb	er 31,	,
	2012		2011
Revenue	\$ 617,728	\$ :	5,122,507
Costs and expenses			
Cost of goods sold (1)	1,117,282		8,916,603
General and administration (2)	3,380,117		5,551,286
Research and development	611,644		2,561,217
Investment income, including interest	(3,044)		(8,374)
	5,105,999	1	7,020,732
Net operating results from discontinued operations, net of taxes	(4,488,271)	(1	1,898,225)
Loss on divestiture of Opel Solar Asia Company Limited, net of taxes (3)	(197,178)		_
Net loss from discontinued operation, net of taxes	(4,685,449)	(1	1,898,225)
Loss attributable to non-controlling interest	107,662		-
Loss from discontinued operation, attributable to equity shareholders	\$ (4,685,449)	\$(1	1,790,563)
(1) Cost of goods sold includes inventory write-down of	\$ 1,143,011	\$	3,570,406
(2) General and administration includes the following:			
Impairment of long lived assets Uncollectible accounts receivable	414,570		1,501,692
Prepaid expenses	195,774 127,602		-
rand empers	12.,002		

<sup>(3)</sup> The Company divested itself of its interest in Opel Solar Asia Company Limited because it was unable to identify a buyer for this investment. The Company therefore recorded a loss on divestiture of \$197,178.

## Explanation of Material Variations by Quarter for the Last Eight Quarters

In the quarter ending September 30, 2012, OPEL's results showed a profit of \$382,666 included in discontinued operations through the negotiation of lower payments on some of its accounts payable and the completion of some final sales commitments to customers. These will be the final billings associated with the discontinued solar business.

In the quarter ending June 30, 2012, OPEL made the decision not to continue the solar related side of its business. All assets and operations were reviewed and the Company took a loss on discontinued operations of \$3,480,717. By the end of the year, all losses associated with discontinuing the solar division totaled \$4, 685,449. All eight quarters in the table above have been retroactively restated to show the effects of the discontinuation of OPEL's solar business.

In the quarter ending December 31, 2011, the Company recorded an inventory write down of \$3,570,406 and an impairment of long lived assets of \$1,501,692. Both items were included in the loss from discontinued operations of \$6,645,439.

In the quarters ending September 30, 2011, December 31, 2011, March 31, 2012, and June 30, 2012, OPEL, through its ODIS division, recorded its lowest levels of revenue since 2008. The U.S. Government stopped all SBIR funding for many companies, including ODIS. This type of grant had been a solid source of funding to develop the POET platform over the years. ODIS was just granted a new SBIR from NASA this quarter which will help fund this activity with new revenue which started in July.

## Segment Disclosure

The Company and its subsidiaries are working to develop a semiconductor design reference technology, the POET platform, which will allow the design of several types of devices, including, for example, infrared sensor-type products for military and industrial applications. The Company's operating and reporting segments reflect the management reporting structure of the organization and the manner in which the chief operating decision maker regularly assesses information for decision making purposes, including the allocation of resources. There were no intersegment sales. The Company's segments and their products and services are summarized below:

## OPEL Solar, Inc. ("OSI")

OSI has discontinued its solar operations in June 2012 and will no longer offer solar products for sale. OSI completed the sale of its tracker business in December 2012. The Company may continue to earn some revenue along with incurring some minor expenses relating to its former solar business over the next twelve months.

## ODIS Inc.

ODIS designs semiconductor devices based on its proprietary POET platform – for example, infrared sensor type products for military and industrial applications. Broadly, ODIS develops III-IV-based processes and semiconductor devices having several potential major market applications – for example 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 telecommunication applications.

Segmented information for the year ended December 31, 2012 and December 31, 2011 is as follows:

	Opel	2012 ODIS	Total	Opel	2011 ODIS	Total	
Revenue Operating expenses Amortization Loss from discontinued	\$ - -	\$ 238,806 1,586,327 4,357	\$ 238,806 1,586,327 4,357	\$ - - -	\$ 755,422 1,775,657 4,193	\$ 755,422 1,775,657 4,193	
operations Segment loss Corporate operations	4,685,44 4,685,44	1,351,878	4,685,449 6,037,327 2,531,074	11,898,225 11,898,225	1,024,428	11,898,225 12,922,653 2,239,073	
Net loss			\$ 8,568,401			\$ 15,161,726	

Assets and capital expenditures at December 31,

		Opel (1)	2012 ODIS	Total		Opel	2011 ODIS		Total	
Total assets Capital expenditures	\$ \$	1,368,226	\$ 672,86 \$ 28,35	2,041,088 28,352	\$ \$	5,046,615 \$ 244,132 \$	70,743 1,647	\$ \$	5,117,358 245,779	

Includes cash of \$618,816, accounts receivable of \$42,997 and prepaids and other current assets of \$100,000 and assets available for sale
of \$606,413.

<sup>(2)</sup> The Company has assets of \$326,172 at its corporate office not included above.

The Company operates geographically in the United States and Canada. Geographical information is as follows:

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As of December 31,		US		Canada	Europe		Consolidated		
Current assets	\$	1, 971,435	\$	326,172	\$	-	\$	2,297,607	
Property and equipment		26,670		-		-		26,670	
Patents and licenses		42,983		-		-		42,983	
	\$	2,041,088	\$	326,172	\$	-	\$	2,367,260	

	US	Canada	I	Europe	Co	onsolidated
Year ended December 31, Revenue	\$ 238,806	\$ -	\$	-	\$	238,806
General and administration Research and development	561,430 1,029,254	2,531,074		-		3,092,504 1,029,254

As of December 31,	US	Canada	]	Europe	С	onsolidated
Current assets	\$ 2,890,651	\$ 483,520	\$	60,779	\$	3,434,950
Property and equipment	1,798,779	-		_		1,798,779
Patents and licenses	169,971	-		-		169,971
Investment in Opel Solar Asia Company Limited	197,178	-		-		197,178
	\$ 5,056,579	\$ 483,520	\$	60,779	\$	5,600,878

20	1	1

	US	Canada	F	Europe	Co	onsolidated
Year ended December 31,						
Revenue	\$ 755,422	\$ -	\$	-	\$	755,422
General and administration	452,793	2,260,988		-		2,713,781
Research and development	1,327,057	-		-		1,327,057
Investment income	-	(21,915)		-		(21,915)

## Liquidity and Capital Resources

The Company had working capital of \$1,433,392 as of December 31, 2012, compared to \$1,703,175 at December 31, 2011. The Company's balance sheet currently has assets with a book value of \$2,367,260 of which 97% or \$2,297,607 is current and primarily cash. This highly liquid and unencumbered balance sheet is a spring board for a flurry of activity in 2013, including but not limited to achieving technical and operational milestones, acquiring new and more modern semi-conductor fabrication equipment and engaging critical commercial and technical staff.

During the year, the Company raised \$5.4M in private placement financing to improve the Company's balance sheet. Subsequent to the year end, the Company raised an additional \$7.2M in private placement financing by issuing 14,400,000 units at a price of \$0.50 per unit (see subsequent events note in the notes to consolidated financial statements). Both capital raises have positioned the Company with sufficient liquidity to support its operations, technological programs and fixed asset purchases over the next 12 to 18 months. Although the Company has been successful in obtaining such financing in the past, there is no assurance that it will be able to do so in the future.

The Company is embarking on an aggressive plan of monetizing POET while simultaneously improving shareholder value. The focus therefore is to remain sufficiently capitalized through lean operations which are expected to reduce the Company's operating cash requirements by approximately 30% or \$600,000.

In April, 2012, OPEL entered into a credit agreement for a revolving credit facility of up to \$5M with TCA Global Credit Master Fund, LP. This credit facility was amended to be a \$850,000 term loan in July and in September, this loan balance and any accrued interest was paid off in full and the facility was terminated.

The Company is in a position to cover its liabilities as they come due for the next 12 to 18 months. Although the Company has historically been successful and raising financing through capital raises, it cannot guarantee that it will always be able to obtain such financings.

## Related party transactions

Compensation to key management personnel were as follows:

	2012		2011
Salaries Share-based payments (1)	\$ 452,615 1,116,124	\$	992,000 742,252
Total	\$ 1,568,739	\$ .	1,734,252

<sup>(1)</sup> Share-based payments are the fair value of options granted to key management personnel and expensed during the year.

During the year, the Company loaned \$100,000 to the CEO of the Company. The loan is non-interest bearing and short-term in nature.

During the year, the Company paid a cumulative total of \$193,692 in consulting fees to two executive directors of the Company.

All transactions with related parties have occurred in the normal course of operations and are measured at the exchange amounts, which are the amounts of consideration established and agreed to by the related parties.

## Critical Accounting Estimates

## Stock-based Compensation

Stock options and warrants awarded to non-employees are accounted for using the fair value of the instrument awarded or service provided, whichever is considered more reliable. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option pricing model with assumptions applicable at the date of grant.

#### Other stock-based payments

The Company accounts for other stock-based payments based on the fair value of the equity instruments issued or service provided, whichever is more reliable.

## Cumulative Translation Adjustment

IFRS requires certain gains and losses such as certain exchange gains and losses arising from the translation of the financial statements of a self-sustaining foreign operation to be included in comprehensive income.

## **Contractual Obligations**

OPEL leased office space and research facilities. The office lease for the Shelton, CT facility was terminated with the landlord, effective the end of September and the facility has been vacated. The lease on the research facility at the University of Connecticut extends to March 31, 2013. The total obligation to the end of that lease is \$27,433.

## Recent Accounting Pronouncements

The Company has considered all other recently issued accounting pronouncements and does not believe the adopting of such pronouncements will have a material impact on its consolidated financial statements. Please see note 3 of the financial statements for additional information.

#### Financial Instruments and Risk Management

The Company's financial instruments consist of cash, accounts receivable, marketable securities, accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Company is not exposed to significant interest or credit risks arising from these financial instruments. The Company estimates that the fair value of these instruments approximate the carrying values due to their short term nature.

## Exchange Rate Risk

The functional currency of OPEL Technologies Inc. is the Canadian dollar. The Company is exposed to foreign currency risk with the Canadian dollar. A 10% change in the Canadian dollar would increase or decrease other comprehensive income by \$25,853. Since the Company's operations predominantly transact their sales and purchases in their respective domestic currencies, the exposure is reduced. Therefore, the Company typically does not hedge accounts receivable and accounts payable that are denominated in a foreign currency.

#### Interest Rate Risk

Short-term investments bear interest at fixed rates, and as such, are subject to interest rate risk resulting from changes in fair value from market fluctuations in interest rates. The Company does not depend on interest from its investments to fund its operations.

#### World Economic Risk

Like many other companies, the world economic climate has impacted OPEL's business and the business of many of its current and prospective customers. The difficult economic climate has led to US Government cutbacks in funding the SBIR's that are used to support ODIS' R&D activities. However, lower interest rates, a lower value of the dollar and rising global liquidity have helped to counterbalance some of these global economic challenges which may lead to the release of some Government funding.

## Liquidity Risk

OPEL predominately relies on equity funding for liquidity to meet current and foreseeable financial requirements. Additionally, ODIS has a history of Governmental funding of some of its projects through SBIR grants but recent Federal budget issues have reduced availability to smaller companies like ODIS.

## Market Risk

Market risk arises from the possibility that changes in market prices will affect the value of the financial instruments of the Company. The Company is exposed to fair value fluctuations on its short-term investments and marketable securities. The Company's 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.

## Strategy and Outlook

During 2013, there are a number of projects planned which will address the short-term and long-term growth plans of the Company including, but not limited to the following:

- Continue to complete the third party validation of the patented POET technology at a fabrication facility that can prove its viability and product potential through ODIS.
- Expand the ODIS engineering team with placement of additional team members at both the ODIS' R&D facility and the third party fabrication facility in Nashua, New Hampshire.
- Procure additional equipment which is required for the continuing development of POET on a more rapid and more efficient basis.
- Actively engage with all Departments of the Military including other Government Agencies pressing for SBIR funding directed at ODIS for projects which serve to enhance POET's development.
- Actively search out opportunities to monetize POET, bringing maximum value to shareholders.

## Significant Events Since December 31, 2012

On February 14, 2013, the Company completed a \$7.2 million private placement which was oversubscribed from a previously announced \$5.5 million. The financing consisted of 14,400,000 Units at a price of \$0.50 per unit. Each unit comprises one common share and one common share purchase warrant. One full warrant allows the holder to acquire one common share of the Company at an exercise price of \$0.75 per share until February 14th, 2015. The Company paid cash commissions of 7% of the funds raised and issued a number of Compensation warrants equal to 10% of the units raised. Each broker warrant allows the holder to acquire one common share of the Company at a price of \$0.50 until February 14th, 2016.

In February, approximately \$1.3M in new capital equipment was ordered to upgrade the R&D facility capabilities and all necessary site infrastructure upgrades were completed to accommodate new equipment on delivery. It is expected that the new equipment will be installed, calibrated, and commissioned in stages so as not to unduly impede progress on milestones, with full system commissioning by the end of June, 2013.

OPEL recently announced the achievement of Milestone 4 in its POET, achieving RF and microwave operation of both n-channel and p-channel transistors, whereby POET extends the capability of its unique monolithic platform to cover integration of a complete range of wavelength-division multiplexed (WDM) capable optoelectronic devices and functions. This is in addition to complementary electronics based on n-channel and p-channel transistors as either field effect transistors (FETs) or bipolar devices. Specifically for this milestone, 3-inch POET wafers produced at a third-party fabrication facility (Nashua, NH) yielded submicron n-channel and micron-sized p-channel transistors operating at frequencies of 42 GHz and 3 GHz respectively. These operating frequencies are expected to be improved even further in the short term to up to 300-350 GHz range for the n-channel device.

## **Outstanding Share Data**

Common Shares

As at December 31, 2012 and March 28, 2013, there were respectively 117,528,615 and 132,474,865 outstanding common shares of the Company.

Stock Options and Warrants

As at December 31, 2012 and March 28, 2013, the Company had respectively 26,778,569 and 55,578,569 warrants outstanding to purchase common shares at exercise prices ranging from \$0.23 – \$0.50

Total stock options outstanding as at December 31, 2012 and March 28, 2013 were respectively 17,602,750 and 17,167,750 shares respectively priced between \$0.16 and \$1.50 per common share.

Additional detailed share data information is available the Company's Notes to Consolidated Financial Statement.

## Off-Balance Sheet Arrangements

The Company has not entered into any off-balance sheet arrangements.

## Key Business Risks and Uncertainties

Dependence Upon Key Personnel – OPEL depends on its senior management and technical staff. If OPEL is unable to attract and retain key personnel, it may have a material adverse effect on the Company. In an effort to manage this risk, the Company has established a competitive compensation grid for all staff that includes certain benefits and stock options. The Company frequently compares its rates of pay to its competitors and the compensation package that would normally be offered to such senior individuals both inside and outside the industry.

Technology Development – Delays in either technology development or the transition to large scale application of the technology may cause a material adverse effect to the Company. Technology development in OPEL follows a strict path of concept, research, business analysis, design, beta testing and technical implementation. These milestones are reviewed regularly with the head of technology development to ensure timely completion the technological milestones. Should major delays ensue, the Company has a policy of advising its stake holders of significant delays and the impact of any such delay.

Financial Liquidity – The Company has not earned profits, so its ability to finance operations is chiefly dependent on equity financings. Given the current financial position of the Company, significant doubt is raised as to the Company's ability to continue as a going concern. However since June 2012, the Company has raised over 12 million dollars in equity financing in support of the POET initiative.

Governmental Incentives – Projects that OPEL might participate in directly or through ODIS may not be funded due to reductions, changes in timing, and/or the removal of government incentives. There is no assurance that the Company will be successful in continuing to focus its energies on commercial applications of the ODIS technology and minimizing its reliance on SBIRs to mitigate this risk.

Ability to Reach Profitability – OPEL has no history of profitability and may not be able to monetize the POET. The Company has been aggressively marketing the technology to industry.

Market Acceptance of New Products – ODIS' POET technology is a new technology which as yet has not installed base and may not be embraced for use by the semiconductor industry. Branding is a key to creating market acceptance. There is no assurance that public announcements, demonstrations along with advertising the Company's high efficiency technology in comparison to competitor products will mitigate this risk.

Technology Changes – OPEL's technology are highly reliant upon keeping pace with technological changes. OPEL's products are complex and rely on state-of-the-art design methodologies to optimize them for market. If OPEL cannot afford to keep pace with these changes, it may have a material adverse effect on the Company. Retaining qualified engineers and scientists has been identified as a KSD for the Company. Qualified personnel will continue to ensure that the Company is not only keeping in touch with technological developments but are also

implementing these new developments. Compensation is key in hiring and retaining these individuals. As discussed above, our Compensation packages have been identified as above standard in the industry.

Major Competitors – OPEL may face several competitors before or after it brings its technology to market which could result in the lack of acceptance thereby having a material adverse effect on the Company. Through research and competitive data, OPEL feels that these markets are ready for a new entrant especially with the efficiency of the ODIS technology. Staying ahead of the curve with R&D, and consistency in new product development will be key to keeping to developing and maintaining market share.

## Additional Information

Additional information relating to the Company is available on SEDAR at www.sedar.com.





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