



Innovations that work.™

ASX Quarterly Report

For the Quarter Ended 31 December 2017

HIGHLIGHTS

EdenCrete®

- **Progress in Georgia.**
 - **GDOT**
 - Current GDOT estimate is for 16 State Funded full depth slab replacement projects for the current year (ending 30 June 2018), with the estimated value of EdenCrete® to be required of approximately US\$1million.
 - 5 of these projects, that will use approximately US\$400,000 worth of EdenCrete®, are currently active, comprising 2 projects in progress, 1 project pending a start, and 2 projects out for tender.
 - Invitations to Bid (ITBs) for the 11 remaining projects are scheduled progressively over the next 3-4 months.
 - FHWA/ GDOT funded repair project for replacement of possibly 11 lane miles or more of badly worn pavement on I-16 Interstate Highway is anticipated to be put to tender in the next 1-3 months.
 - Eden received a follow-up order in Georgia to supply approx. 1,400 gallons of EdenCrete® to be used in the replacement of 3,400 square metres of concrete hardstand area that is subject to heavy-duty wear and abrasion.
 - Possible projects with MARTA using EdenCrete® are under consideration.
- **Progress in Texas**
 - Existing contract was extended to include supplying EdenCrete® to 2 additional plants owned by same customer.
 - Sales for TxDOT bridge beams continuing with fourth tanker delivery to the first customer scheduled for early February 2018.
 - Trials with other TxDOT manufacturers anticipated.
- **New Product Development**
 - Product development completed for:
 - High concentration, lower cost EdenCrete®HC, and
 - EdenCrete®Pz for use in concrete made with pozzolanic cements, which represents up to 30% on the total concrete market.
 - Encouraging performance achieved in extensive in-house testing.

- Eight independent laboratory trials using regional cements and commercial mixes have commenced, testing up to eight performance characteristics, to assist in US marketing.
- Strong interest in EdenCrete®HC and EdenCrete®Pz received at commercial release during World of Concrete convention in Las Vegas in January 2018.
- Up to 30 commercial trials of a wide range of performance characteristics planned for next 3 - 6 months with sales expected to increase progressively over the coming year.
- ASTM trials of EdenCrete®Pz have commenced with encouraging preliminary results.
- NTPEP trials of EdenCrete®HC and EdenCrete®Pz to start in early February 2018.
- Denver Public Works undertook follow-up evaluation trials of EdenCrete® when exposed to heavy dosages of de-icing salts and road chemicals.
- EdenCrete® trials for bridge trials with Virginia DOT and North Carolina DOT are under discussion.
- EdenCrete® was approved for use by the Alaska DOT and in January received conditional approval from Oregon DOT.
- Testing of EdenCrete®HC and EdenCrete®Pz with Korean cements at Eden's Colorado plant are underway.

Optiblend® Dual Fuel

- Orders received in USA and India during the quarter for US\$60,000.

DETAILS

EDENCRETE® (Eden 100%)

Sales of EdenCrete®

Eden's original annual sales target for this financial year of US\$6 million, based on anticipated sales of the original EdenCrete®, may still be achieved but has become less certain due two main factors. These are:

- the total estimated number of the GDOT full depth slab replacement projects to be undertaken this year (including Federally funded projects) has been revised from twenty three projects to seventeen projects; and
- sales in Texas having been slower than anticipated due in large part to extended delays in the customer's production caused by extreme weather events (Hurricane Harvey and extreme winter cold).

Eden, however, is still hopeful of achieving the current year's goal based both on existing projects utilising EdenCrete® that are underway or already in the pipeline, supplemented by anticipated initial sales of EdenCrete®HC and EdenCrete®Pz that are projected to start to grow over the next 6 months.

Georgia

GDOT 2017/2018 Repair Projects

State funded projects

In June 2017 Eden received confirmation from Georgia Department of Transportation (GDOT) that EdenCrete® would be used in all State funded, full depth slab repair jobs this financial year.

The current, revised GDOT estimate is that there will be sixteen State funded, full depth slab replacement projects during the current financial year (ending 30 June 2018) that will require approximately US\$1million worth of EdenCrete®.

Five of these projects, requiring approximately US\$400,000 of EdenCrete®, are currently active. These comprise two projects that are under construction, one project that has been tendered, the contract let and the project is being prepared for commencement, and two projects that are currently out for tender.

The remaining eleven Invitations to Bid (ITBs) should be advertised over the next 2-3 months.

Federal/GDOT funded projects

In September 2017 Eden also received Federal Highway Administration (FHWA) approval for use of EdenCrete® in partially federally funded, full depth slab repair projects in Georgia. A large FHWA/ GDOT funded repair project for replacement many lane miles of badly worn pavement on I-16 Interstate Highway is anticipated to be advertised for tender in the next 1-3 months.

In September 2017 Eden was advised that this project would occur this financial year and could involve the replacement of perhaps 11 lane miles of pavement, which was anticipated could require the use of up to approximately US\$1.3 million of EdenCrete®. Final details of this project and the actual amount of EdenCrete® that will be required will be known when the tender details are advertised.

Follow-up Order in Georgia for Ultra Heavy Wear and Abrasion Project

During the quarter Eden received a follow-up order for 1,400 gallons (5,500 litres) of EdenCrete® for use in concrete at a railway wagon repair plant in Georgia, to replace approximately 4,100 square yards (3,428m²) of concrete hardstand area that is subject to significant wear and abrasion. This follows the successful performance of EdenCrete® enriched concrete in an earlier project undertaken at the same site in April 2016 (see announcement ASX: EDE 18 April 2016) and an earlier field trial undertaken in September 2015.

The project, at a major regional maintenance facility in Georgia for a large US company where very heavy steel components from a national transport fleet are repaired and maintained, took a month to complete and involved replacement of approximately 700 cubic yards of concrete to which US\$35,000 of EdenCrete® was added at 2 gallons/yard³ of concrete (9.055 litres/m³).

The concrete section that was replaced in April 2016 was exposed to extreme rolling loads, impact loads, and abrasive wear, with a loading of up to 40,000 pounds per square yard that usually severely cracked the concrete and required frequent replacement. The new, far greater area of concrete that was recently replaced, will not be exposed to such a heavy loading, but will still be exposed to significant rolling loads, impact loads and abrasive wear. The use of EdenCrete® in the earlier project enabled the entire replacement section to be constructed with significantly reduced less materials and labour than would have been required for the alternative new ultra-high strength mix design, delivering a 45% reduction in the total costs of

that project compared with the budgeted cost of carrying out the same work using the new ultra-high strength mix design.

The decision to halve the dosage rate of EdenCrete® to two gallons per yard² of concrete in the latest project, compared with four gallons per yard³ of concrete used in the first project, is considered a very strong testimony to the benefits EdenCrete® delivered in the first project.

Projects with MARTA under consideration

Following a technical presentation, made during the quarter to the senior engineering staff at the Metropolitan Atlanta Rapid Transit Authority (MARTA) of the benefits delivered by EdenCrete®, including a review of the project undertaken in July 2016 with MARTA (see Eden announcement ASX: EDE 18 July 2016), a number of possible forthcoming MARTA projects are being considered by MARTA in which EdenCrete® may be used.

Atlanta, the sixth fastest growing metropolitan area in the US, has a current population of more than 7 million people that is expected to grow to 8 million by 2020.

MARTA is the primary public transport operator in Atlanta and operates a network of bus routes that link to a rapid transit system consisting of 48 miles (77km) of rail track with 38 train stations. It carries, in total, over 430,000 passengers per day, the sixth largest number of any US city. To cater for this growth, a number of alternatives for expansion are being considered, all of which could generate significant opportunities for the use of EdenCrete® in new projects that are being considered. MARTA also undertakes a considerable amount of annual maintenance.

The broad level of interest that has been shown by the MARTA engineering staff in the benefits that EdenCrete® can deliver is very encouraging and it is hoped that this interest will translate into future projects over the next six to twelve months.

Texas

Texas Pre-stressed Concrete Manufacturers

A leading TxDOT-approved pre-stressed bridge beam manufacturer in Texas has already been supplied with 3 tanker loads of EdenCrete® worth over US\$300,000 since April 2017 and a fourth tanker load is scheduled in early February 2018. The customer has recently extended the contract to include also supplying two additional plants, and annual sales to this customer alone could now be worth up to US\$1.4 million over the full year.

Discussions for trials with a number of other TxDOT approved pre-stressed bridge beam manufacturers for trails have commenced and trials are anticipated over the next few months.

EdenCrete® New Product Development

During the quarter Eden completed the development and in-house testing of both EdenCrete®HC, a high concentration, lower cost version of the original EdenCrete®, and EdenCrete®Pz, a new product suitable for use in concrete made using a combination of Portland cement and pozzolanic cements. Pozzolanic cements represent approximately 9% of all cement used in the US but because it generally comprises between only 15-40% of the total cementitious material in a concrete mix, pozzolanic cements are estimated to be used in 30-35% of all concrete produced in the US, making this a significant target market.

Further product development of a wider range of specialty variations of EdenCrete® for various specific specialist concrete applications is continuing. This development work is technically

complex and will take time and requires comprehensive testing of each new application before any new products will be made available commercially.

During the quarter Eden further expanded its highly skilled and experienced product development team that now includes a highly qualified and experienced chemist, a chemical engineer and various concrete experts. The newly constructed, well-equipped product development facility within Eden's Mead Way plant includes both a chemistry laboratory, and concrete production and testing facilities.

Development of EdenCrete®HC and EdenCrete®Pz completed

Encouraging performance levels have been achieved with EdenCrete®HC and EdenCrete®Pz in the in-house testing programme, and each is anticipated to deliver cost competitive benefits to a wide range of customers across the US.

Independent laboratory trials started of EdenCrete®HC and EdenCrete®Pz

To assist in the marketing, eight respected, independent US laboratories, all in different States, were selected by our sales team to test the new products for various applications using regional cements and widely used commercial mixes. This testing has commenced and each will test up to eight different performance characteristics including compressive strength, flexural strength, split tensile strength, abrasion resistance, modulus of elasticity, shrinkage, permeability and scaling.

This wide range of testing, that is will take 3-5 months to complete, will provide independent data on regional performance in widely used mix designs, that will assist our sales team in marketing our products across the US. Some encouraging preliminary results have been received already.

Commercial trials to commence following commercial release at World of Concrete

The commercial release of both EdenCrete®HC and EdenCrete®Pz took place at the 2018 World of Concrete convention in Las Vegas in January 2018 and generated significant interest. Up to 30 commercial trials of these products, targeting the wide range of performance characteristics that are being tested in the independent laboratory trials, are planned to occur over next three to six months, starting in New York with trials of EdenCrete®Pz in ready mix trucks using a widely used commercial mix that includes 40% blast furnace slag in its cementitious material.

ASTM Trials of EdenCrete®Pz

ASTM C494 "S" trials of EdenCrete®Pz have also commenced at an independent laboratory and will take 12 months to complete fully, although earlier sales for some applications are anticipated as more results progressively become available. The ASTM specifications mandate that admixtures must be tested in a specified 100% Portland cement mix (i.e. containing no pozzolanic cement). To be successful in this ASTM trial, EdenCrete®Pz must simply not reduce the performance of the concrete when compared with the same mix that contains no EdenCrete®Pz. For the ASTM trial, EdenCrete®Pz was added to the mix at the rate of 18.5 ounces (0.55 litres) per cubic yard (0.7646 m³) of concrete.

Encouragingly, to date only the 3 day and 7 day results for both compressive strength and flexural strength have been received in the ASTM trials, and in all these tests, the strength of the concrete to which the EdenCrete®Pz had been added was greater than the strength of the standard mix.

NTPEP Trials of EdenCrete®HC and EdenCrete®Pz

NTPEP trials of both new products are to commence in early February 2018 at an independent laboratory appointed by NTPEP. These tests will take 12 months to complete. Successful NTPEP trial results should enable these new products to be approved for use by the various State Departments of Transportation that exclusively require the NTPEP testing process to have first been completed before approving any new product for use on their roads and bridges.

EdenCrete®HC

EdenCrete®HC is a higher concentration (double strength) version of EdenCrete® that produces performance levels equivalent to at least twice that of the standard EdenCrete®. It retains the same chemistry as EdenCrete®. However, as only half the volume for at least the same performance improvement is required, it results in greatly reduced transport and storage costs, and a net overall higher value product per gallon. As a consequence, it will be sold at a price that will enable customers to achieve at least the same performance level as from the standard EdenCrete® but at a significantly lower effective price per cubic yard of concrete than they can achieve with standard EdenCrete® at the current price. Over time, because EdenCrete®HC is simply a lower cost, concentrated version of EdenCrete®, it is anticipated that EdenCrete®HC will largely replace EdenCrete® in the market.

EdenCrete®Pz

EdenCrete®Pz is a new product that is compatible with concrete that includes pozzolanic cements, which the original EdenCrete® did not greatly assist. EdenCrete®Pz significantly expands the market for EdenCrete® products. Pozzolanic concrete is a high strength alternative form of concrete that is used in a variety of applications, such as pre-cast concrete, high-rise and general construction, large industrial concrete structures such as bridges and dams, and marine settings. Pozzolanic concrete is based on using pozzolanic cement as a replacement for portion of the standard cement (Ordinary Portland Cement, or OPC) in the concrete formation process.

US State Departments of Transportation Approvals

During the quarter Eden received approval for the use of EdenCrete® from the Department of Transportation in Alaska. Subsequent to the end of the quarter, conditional approval from the Department of Transportation in Oregon was also received.

EdenCrete® is now approved and in commercial use in both Georgia and Texas, and approved for the use in one or more applications by the Departments of Transportation in 9 other States of the US (all of which States are shown in dark grey or black on Figure 1), representing approximately:

- 25% of the total US population;
- 39% of the total US land area;
- 36,294 bridges that are structurally deficient or functionally obsolete*; or
- 26% of the total number of such bridges in the USA*.

* DOT Fact Sheets Highlight Grim State of US Roads and Bridges – 9 July 2015

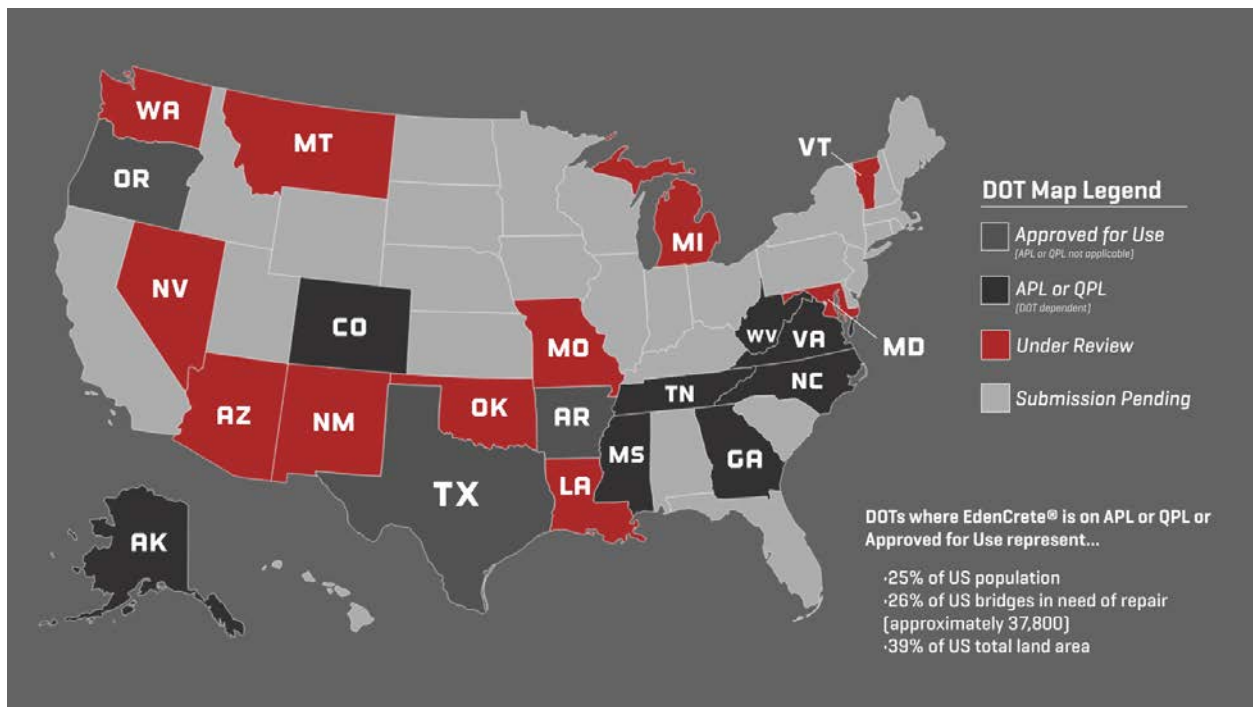


Figure 1. Map of USA showing current position of DOTs Approval

As at the date of this Quarterly Report, applications for approval of the use of EdenCrete® have also been lodged in 11 other US States (shown in red on Figure 1) and submissions are planned for the other States that do not exclusively require the NTPEP testing to be completed.

EdenCrete® is a Type S admixture. Each DOT handles Type S admixtures differently. Some have them on their Qualified Products List (QPL) or Approved Products List (APL). QPL and APL mean the same thing, but different states use different nomenclature. Conversely, the State may choose not to have Type S admixtures on the QPL or APL and may simply allow them to be used on a project-by-project basis or mix design approval process. That is what the Oregon DOT has chosen to do and is similar to Texas and Arkansas DOTs.

Oregon DOT does not have Type S admixtures (EdenCrete® is a Type S admixture) on the QPL or APL and may simply allow them to be used on a project-by-project basis or mix design approval process. Oregon DOT will evaluate the proposed mix design for the project and determine its applicability with EdenCrete®.

In Georgia, EdenCrete® is approved for use in the GDOT 24 hour full depth slab replacements mix and is included in the GDOT specifications for full depth slab replacements. In addition the US Federal Highway Administration (FHWA) has now approved the use of EdenCrete® in concrete used by the Georgia GDOT in repair projects in Georgia that are partly federally funded (and to which FHWA contributes 80% of the costs). EdenCrete® was used by GDOT in its first commercial, highway repair project in March 2017 and further sales are anticipated in the current financial year. EdenCrete® is also undergoing a 12 months' field trial for new road construction that will conclude after 12 months of service, which should be sometime in the first three to four months of 2019.

Eden anticipates that the initial FHWA approval for use in the repair projects in Georgia may well help should future FHWA approval is required in any other state (where EdenCrete® is specified by name).

In Texas, TxDOT has approved the use of EdenCrete® in two proprietary concrete mixes used by a precast manufacturer of pre-stressed beams for bridges, in which EdenCrete® is now being

used on a regular basis. Test work with a number of other TxDOT approved precast manufacturers has either been carried out or is also under discussion.

Eden is endeavouring to secure trials that could lead to contracts as early as possible in these States.

EdenCrete® trials in bridge projects with both Virginia DOT and North Carolina DOT under discussion

Trials of EdenCrete® in concrete to be used in bridge projects in both Virginia and North Carolina are being discussed with the Departments of Transportation in each of these States. EdenCrete® is already included on the both the VDOT Approved Products List (see Eden announcement ASX: EDE 3 April 2017) and the NCDOT Approved Products List (see Eden announcement ASX: EDE 19 June 2017). Eden is working to try and arrange these trials as soon as is reasonably possible.

Other Trials

Denver Public Works undertook follow-up evaluation trials of EdenCrete® when exposed to heavy dosages of de-icing salts and road chemicals.

Following positive results from initial trials with the Denver Public Works (see Eden ASX Announcement ASX: EDE 20 February 2017), a further field trial involving two larger sections of concrete pavement with EdenCrete® was undertaken during the quarter in Denver to further evaluate EdenCrete® where use of significant quantities of de-icing salts and road chemicals breaks down the concrete.

The Denver Public Works has confirmed that these additional trials should provide sufficient data to enable it to assess the benefits that EdenCrete® delivers. The completion of the trials is likely to be sometime in the next 12 months, after the winter period during which large quantities of de-icing salts and road chemicals are used on the roads and sidewalks.

It is hoped that positive results will translate into the Denver Public Works commencing to use EdenCrete® on a broad scale, and could also potentially lead to its use in other areas of Colorado by other government agencies. Relevantly, the Colorado Department of Transportation (CDOT) recently added EdenCrete® to its Approved Products List.

The results from these trials also have great relevance for the future marketing of EdenCrete® for use on highways, roads, bridges, sidewalks, airport runways and anywhere where concrete is subject to snow and ice and de-icing salts and road chemicals are commonly used.

Korean EdenCrete® Trials

In June 2017, Eden signed a Memorandum of Understanding (“MOU”) with Korea Consultants International Co., Ltd. (“KCI”), a Seoul-based engineering consulting firm, to jointly review the feasibility of KCI being appointed as the sole distributor in the Republic of Korea (“Korea”) for EdenCrete®.

Trials of EdenCrete® with Korean cement are continuing. The chemistry of cement used in Korea is different from cement manufactured in the US and Eden is presently undertaking test work in Colorado on three different Korean cements to try and increase each of their responses to EdenCrete®HC and EdenCrete®Pz. In the same manner that Eden solved the issues with pozzolanic cements that led to the development of EdenCrete®Pz, Eden is presently making encouraging progress with these trials, and is hopeful of achieving a successful outcome with the Korean cement over the next few months that could help open up a significant market.

The current MOU signed between Eden and KCI is non-binding and preliminary, and depending upon the progress and outcomes from these tests and further discussions with the relevant government bodies, which may take a further several months or more to complete, Eden and KCI intend to negotiate the possible appointment of KCI as the exclusive distributor of EdenCrete® in Korea, a country of over 50 million people that is a major user of concrete for both high rise construction and infrastructure.

Proposed Georgia EdenCrete® Production Facility

As previously announced (ASX: EDE 14 April 2016), Eden's wholly owned US subsidiary, EdenCrete Industries Inc. ("ECI") has secured an attractive financial assistance and incentives package worth an aggregate of US\$24.76 million to assist its planned establishment of a large scale global manufacturing plant in Augusta, Georgia on 57.75 hectares (143.5 acres) of industrial land located in the Augusta Industrial Park that is being provided by the Augusta Economic Development Authority ("AEDA").

The construction of the access road, through the Augusta Industrial Park to the proposed site has been commenced but progress has been delayed due to design changes made by AEDA.

ECI proposes to establish its large-scale global EdenCrete® production facility in Augusta over the next seven years at a currently estimated cost of US\$67 million for the first phase, to create approximately 251 jobs, and upon which the incentive package is conditional.

On- Going Joint Research Projects

High strength CNT enriched concrete requiring little or no reinforcing steel

The three-year research project with Deakin University ("Deakin"), partly funded by an Australian Research Council ("ARC") Linkage Grant, into ultra-high strength carbon nanotube enriched concrete requiring little or even no reinforcing steel, continued during the quarter.

Trial work continued at Deakin with EdenCrete® enriched concrete for a range of applications and the initial results will be followed up.

This project offers Eden a great opportunity to collaborate in world-leading, high level research into how its EdenCrete® carbon nanotube enriched concrete admixture affects concrete at a nano-scale, delivering increased flexural and compressive strength, increased abrasion resistance and reduced permeability, amongst other benefits.

This research could potentially lead to both the improvement of EdenCrete® and the development of ultra-high strength concrete that requires little or no steel re-enforcing. Quite apart from the enormous environmental and financial implications that such an outcome would have, it also has major implications for the global construction industry. Eden has already made significant progress with EdenCrete® towards achieving this goal, and this new project should assist in accelerating this progress.

EdenPlast™ / CNT Enriched Polymers and Plastics

The jointly funded research project between Eden and the University of Queensland ("UQ") in Brisbane for the development on a new method for producing carbon nanotube ("CNT") enriched thermoplastic composites, continued during the quarter. This project was awarded a Linkage Research Grant worth A\$310,000 by the Australian Research Council ("ARC") that is payable over three years to meet part of the costs, and to which project both Eden and UQ will also contribute.

As previously advised, at a laboratory scale, preliminary trials by UQ produced a 50 per cent increase in stiffness of polypropylene and an increase in electrical conductivity with the addition of 0.5 weight per cent CNT.

This new project aims to unravel the mechanisms by which these outstanding property improvements are achieved and to scale up the process to an industrial level. The targeted outcomes are economical, lighter and stronger plastics for manufacturing applications such as rotational moulding, transport and electronic packaging. Whilst this targeted objective will take time to complete, the results to date remain highly encouraging.

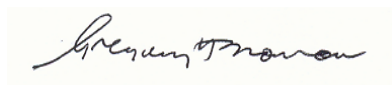
OPTIBLEND® DUAL FUEL SYSTEM (EDEN 100%)

OptiBlend® Progress

During the quarter, Eden Innovations LLC, Eden's wholly owned U.S. subsidiary, received one purchase order for an OptiBlend® kit and Eden Innovations India Pvt Ltd received two new orders, the total of these is approximately US\$60,000.

OptiBlend® Background

Eden has developed an efficient dual fuel system that is capable of operating on diesel engines and displacing up to 70% of the diesel fuel with natural gas. If Hythane™ fuel (hydrogen enriched natural gas) is used in place of natural gas the displacement of diesel fuel could be as high as 80%. The use of the natural gas will greatly reduce greenhouse gas emissions and, in places where natural gas is cheaper than diesel, will also reduce fuel costs. It has significant market potential particularly in the diesel-powered generator set ("genset") market.



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