

**APEC International Workshop and Training on
The Role of Business Incubators in Developing Green Technology-Based SMEs
Yogyakarta, Indonesia, 27 - 29 September 2011**

Annex B

Annex B. PRESENTATIONS FROM SPEAKERS

THE BEST INNOVATION AWARD 2011





**Asia-Pacific
Economic Cooperation**

SECTOR : GREEN TECHNOLOGY SECTOR
APEC SME 04 2011A

COMPANY : SUCCESS NEXUS BIOFUEL S/B –
A BIO-TECHNOLOGY COMPANY &
GREEN CERTIFIED PROJECT

PRESENTER : MR. JERRY PHUNG, CEO



THE BEST INNOVATION AWARD, 2011



DEFINITION OF INNOVATION AND GREEN TECHNOLOGY

INNOVATION IS DEFINED AS THE **PROCESS** BY WHICH AN IDEA OR INVENTION IS TRANSLATED INTO **GOODS OR SERVICES** FOR WHICH PEOPLE **WILL PAY**, OR SOMETHING THAT **RESULTS** FROM THIS PROCESS

GREEN TECHNOLOGY (GT) is the development and application of products, equipment and systems used to conserve the natural environment and resources, which minimize and reduces the negative impact of human activities.

GT embraces the

- ❖ MINIMIZATION OF DEGRADATION OF ENVIRONMENT
- ❖ ZERO OR REDUCE GHG EMISSION
- ❖ CONSERVATION OF THE USE OF ENERGY & NATURAL RESOURCES
- ❖ PROMOTION OF RENEWABLE RESOURCES

GT POLICY PILLARS ON 4 KEY AREAS –
ENERGY, ENVIRONMENT, ECONOMICS AND SOCIAL

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1. Name:	SUCCESS NEXUS BIOFUEL SDN BHD
2. Sector:	GREENTECHNOLOGY
3. Products: Services:	BIOFUEL& RENEWABLE ENERGY BIO-REFINERY FACILITY & SOLUTIONS
4. Year of Incorporation:	2002
5. Prominent/Management background:	TECHNOPRENUERS, BIO-TECHNOLOGISTS & STRATEGIC INNOVATOR(S)/PROFESSIONAL(S)
6. Factory:	LOT F-1, LUMUT INDUSTRIAL PARK, LUMUT PORT, MUKIM MANJUNG, 32000 SITIAWAN, PERAK
7. Nature of Business:	GREEN BIO-REFINERY & R&D&C ACTIVITIES TOWARDS ALTERNATIVE RENEWABLE ENERGY
8. Sales Turnover (2010):	RM 1,000,000.00/ USD 350,000.00
9. Number of Staff:	20
10. What makes SUCCESS NEXUS the <u>WINNER</u>?	OUR <i>i-PRODUCTS</i> ARE GREEN AND OUR STRENGTH IS OUR <i>k-PEOPLE</i>.

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SUCCESS NEXUS – A STAR INNOVATION WINNER IS BORN

TABLE OF CONTENTS

- 1 INNOVATION PROCESS
- 2 MOBILE i- PRODUCT(S)
- 3 k-TEAM MEMBERS & ROLES
- 4 IMPACT TO MALAYSIAN WAY OF LIFE - NEM
- 5 SUCCESS' NATIONAL & ASEAN IMPACT UNDER NEM
- 6 Q&A



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(1/i) INNOVATION PROCESS – PRIMARY IDEAS



What is
desirable to
users?

FUEL / ENERGY
Demand ↑ & Price ↑



What is viable in
the market
place?

WASTE → ENERGY



What is possible
with
technology?

**SN'S TECH i-
SOLUTION**
Multifeed &
Mobility

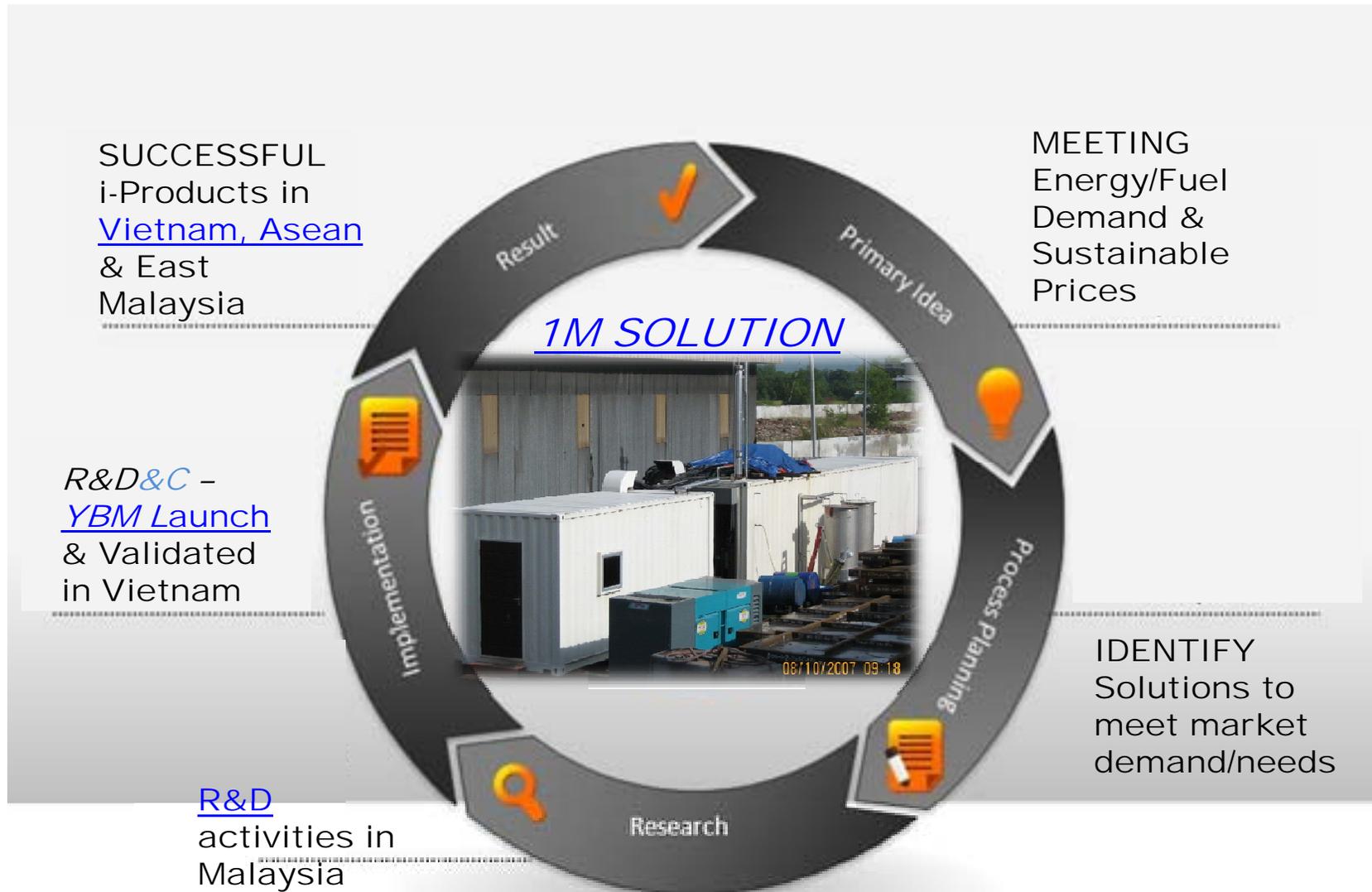
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(1/ii) INNOVATION PROCESS



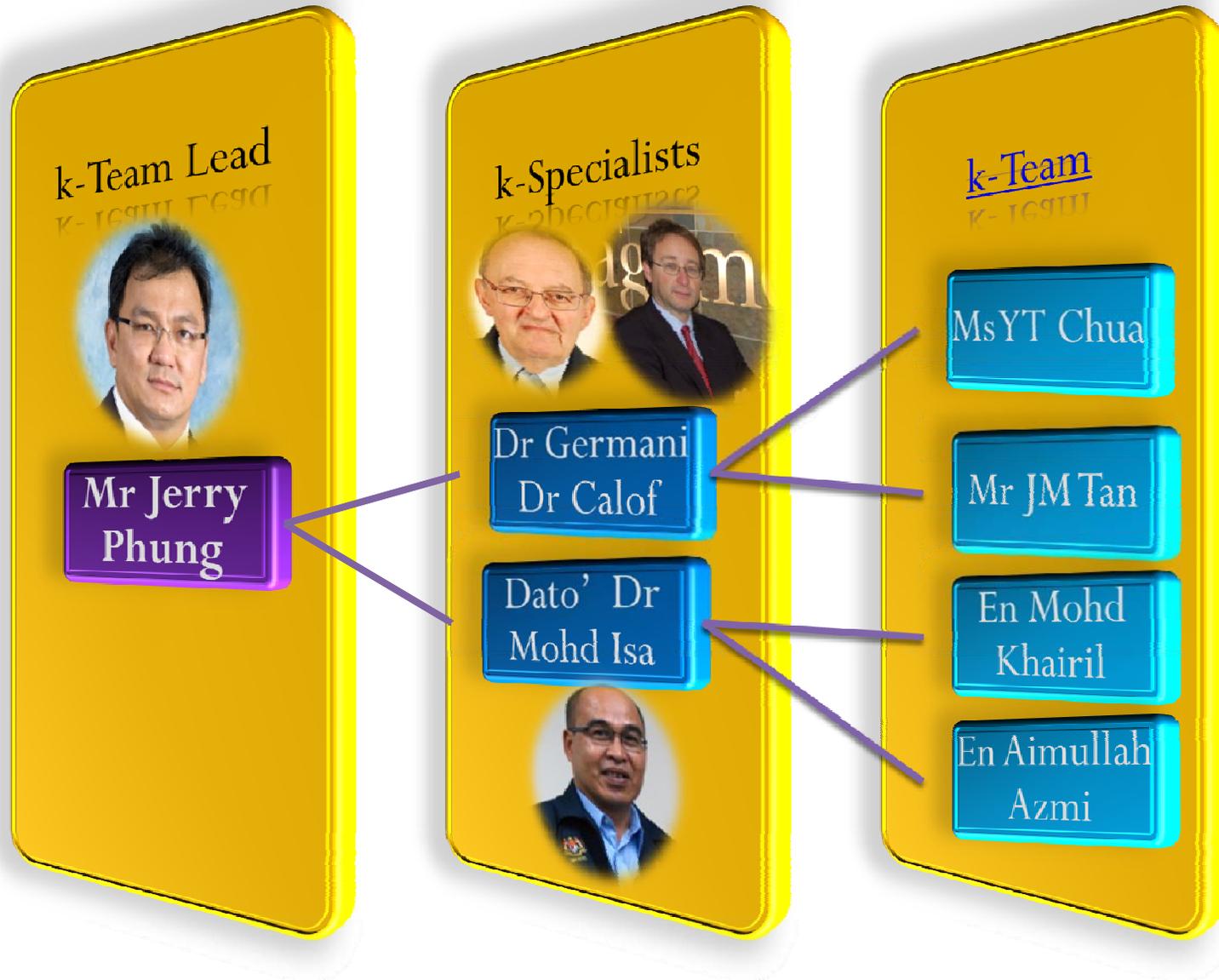
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(2.0) MOBILE *i-PRODUCTS*



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(3.0) i-TEAM MEMBERS' AND ROLES



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(4-i) IMPACT TO MALAYSIAN WAY OF LIFE & NEM

Micro Picture (Malaysian way of life) – New Economic Model

1M @ 5 mt/day generates :

- 6,000/kg/day of biodiesel per mobile or 2,433 Thermal Kwh;
- supports 6 generators & generate electric power of 973.2 Kw/ genset; and/or
- produces 6,600 liters/day of biodiesel for transportation/ machineries
- support 500 families usage of 300 Kw/month power electricity
- new human resource development & new skills/education.

with 50 units of 1M @ 5 mt/day:

- will generate 45,000 Kwh or 330,000 liters of biodiesel
- improve quality of life of 50 rural communities (especially in Sabah & Sarawak, Malaysia)
- at a fraction (i.e. 1/5 or RM 5.0 m/M) of huge infrastructure costs for substations and cables lines (est. RM 750.0 m - RM 1b or RM 25m per facility)
- development of a pool of skilled HR resource and provide education.



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(4-ii) IMPACT TO MALAYSIAN WAY OF LIFE UNDER NEM

Big Picture to New Economic Model

- Innovation 1M - Competitiveness in alternative renewable energy/biofuel based on waste to energy;
- [UNFCCC CDM compliance](#) - Environmental friendly, sustainable and self sufficiency in renewable energy/biofuel in meeting energy security;
- Development of new skills/knowledge - Human Capital development towards high income economy;
- Waste to Energy - New source of growth in green renewable energy and green technology.



Competitiveness



Environment/ Sustainability



[Human Capital](#)



[New Sources of Growth](#)

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(5.1) SUCCESS' NATIONAL IMPACT UNDER NEM

INNOVATION PROCESS

Strategy

**1 MOBILE
SOLUTION**

Technology

**MULTI FEED &
MOBILITY**

User

**MARKET
DEMAND –
REGIONAL /
GLOBAL**

SUCCESS ' COMMERCIAL STRATEGY - 1M SOLUTION

- 1) Phase 1 (12-18 mths) – RM 30.0 m funding to fulfill 5 1M ORDERS: Malaysia (2 units) & Vietnam (3 units). Asean (45 units) WIP.
- 2) Phase 2 (18-24 mths) – Add. RM 30m new equity to ACCELERATE GTFS Lumut plant & fulfill 1st shipment - 8,000 mt by 4Q 2012;
- 3) Phase 3 (≥24 mths) - Revive idle cap. (10) – deploy SN's GT via RMK10/NEM incentives – IRS/GTFS/SME

TARGET NATIONAL IMPACT - 1M SOLUTION

- 1) GNI - RM 30.0 m p.a. for Phase 1. Asean supports add. 45 units1Ms - RM 270m additional GNI;
- 2) Phase 2 – GNI RM 350 m p.a. for 5 yrs from 2012 - 2015;
- 3) Phase 3 – GNI RM 3.35 b for10 idle plants (100 k cap.) conversion;
- 4) CDM contribution to GNI ; &
- 5) High income job creations & catalyst of growth to green SME industries

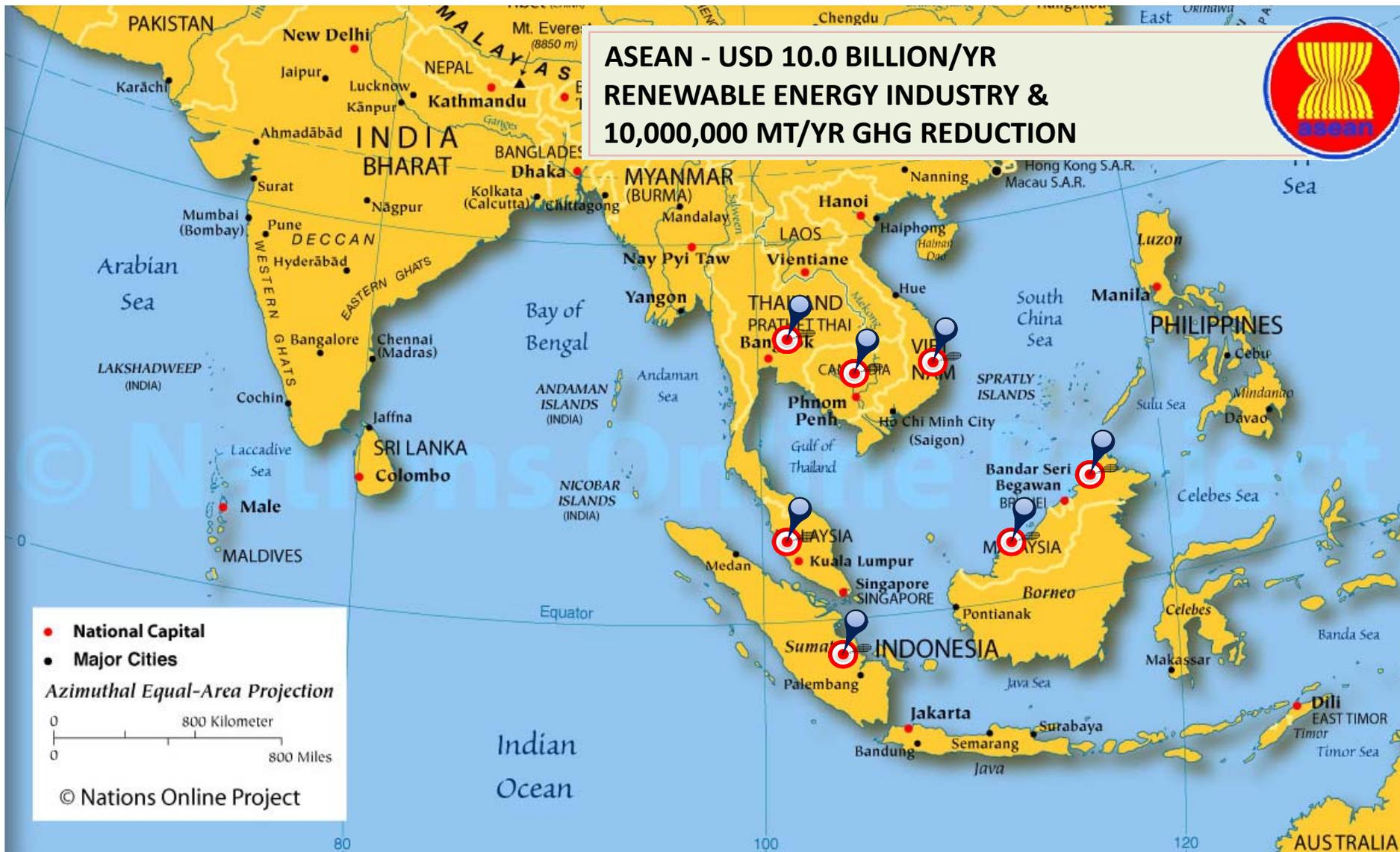
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(5.1) SUCCESS' NATIONAL IMPACT UNDER NEM

INDICATORS	PHASE 1 2011-2012	PHASE 2 2011-2015	PHASE 3 2013-2020	TOTAL PHASE 1-3
New Investment	RM 100m (50 mobiles)	RM 120m (Main Plant)	RM 300m (Idle Plants)	RM 520m
Employment High Income	150	100	1,000	1,250
Total GNI / Revenue	RM 300m	RM 350m	RM 3.35b	RM 4.0b
<u>CER p.a.</u>	75,000	300,000	3,000,000	3,307,500
Per CER contracted period – 7 yrs	3,750,000	2,100,000	21,000,000	26,850,000
GNI - CER @ €10.00 AT FOREX RM 4.40 : € 1.00	RM 165m	RM 92.4m	RM 924m	RM 1.18b

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(5.2) SUCCESS' ASEAN IMPACT UNDER NEM



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Mr. JERRY PHUNG, CEO
DR. MAURIZIO GERMANI, CTO
PROF. DATO' DR. MOHD ISA,
DG, IPHARM

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Thank
You

RENEWABLE ENERGY FOR A CLEANER WORLD

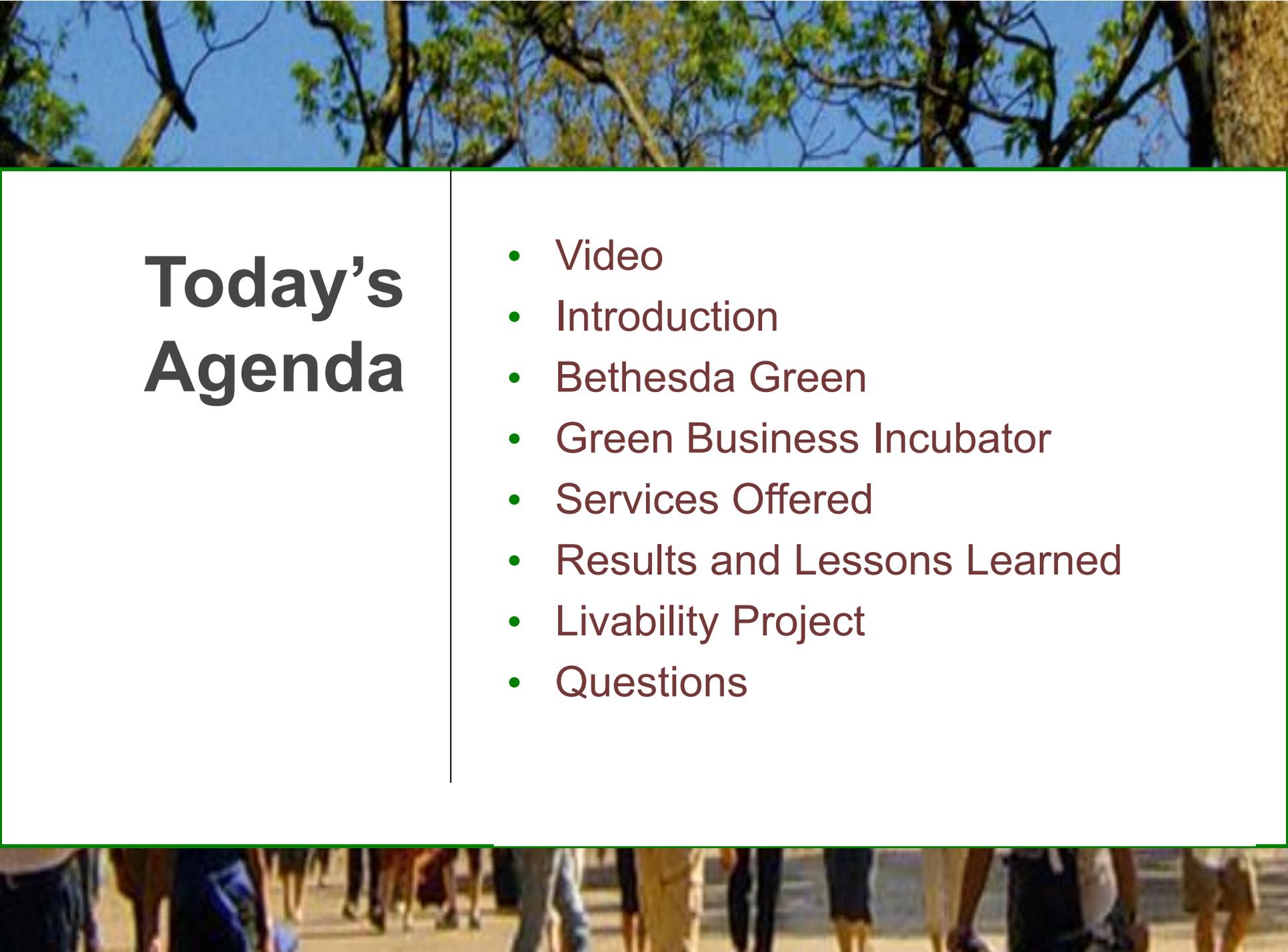


Incubating Green Business SMEs

September 28, 2011
Yogyakarta, Indonesia

by **Dave Feldman**
Executive Director, Bethesda Green &
CEO, Livability Project



The background of the slide is a composite image. The top portion shows a clear blue sky with the green and brown branches of trees. The bottom portion shows a blurred crowd of people walking, with their legs and feet visible. A thin green border surrounds the entire slide content.

Today's Agenda

- Video
- Introduction
- Bethesda Green
- Green Business Incubator
- Services Offered
- Results and Lessons Learned
- Livability Project
- Questions

The background of the slide is a composite image. The top portion shows a clear blue sky with the green leaves and dark branches of trees. The bottom portion shows a blurred crowd of people walking, with their legs and feet visible in various colors of clothing.

Dave Feldman Background

- **Tech Sector**
 - Sales, Marketing, Business development
 - Middleware, Wireless software
- **Consul, UK Trade & Investment**
 - Led Economic Development Team
 - NBIA speaker – International Incubation
 - Business Incubator Competition
- **Launch of Livability Project**
- **Why I do this work**

Bethesda, Maryland



Bethesda Green History



- Public-Private Partnership
- Launched January 2008
- Multiple Stakeholders
 - Business
 - Government
 - Residents
 - Chamber of Commerce
- Working groups, Volunteers
- 501(c) (3) (non-profit) – 2008
- Current staff
- “Incubate, Educate, Initiate”

Our Purpose/Mission

At Bethesda Green, we bring business, government and community together through programs and services to promote a healthy economy and sustainable living practices in order to reduce our collective impact on the environment.

Strategies to Achieve Our Mission

Incubate	Educate	Initiate
Stimulate next generation green business models and solutions.	Raise awareness and inspire action through the programs, online tools, and education and resource center.	Develop, manage and promote programs that leverage community assets.

1. Leverage community organizations as non-profit
2. Community engagement/Leadership development
3. Scale up what works
 - Electronics recycling
 - Education Center
 - Events and Quality Programs
4. Multiple revenue streams
 - Partial funded by government
 - Strong private sector component
 - Incubator and paid services
5. In-Kind contributions



Green Business Incubator





Green Incubator Goals

- Develop community of green entrepreneurs to create jobs and build wealth
 - Facilitate business growth by creating local market demand
 - Commercialize green products and services that complement Bethesda Green's mission
 - Diversify local and regional economy
- 

Incubator Structure, Culture

- Integration with education center and programs
- SMEs are prime focus
- Beyond Clean-tech
- Culture of innovation
- Collaboration is key
- Common source of funding
- Full- and part-time



Selection Process

- High potential for economic success and align with Bethesda Green's sustainability mission
- Evaluation based on business model, potential fit with Bethesda Green culture, ability to impact community and potential to build vibrant green business cluster
- Must submit
 - Application Form
 - Current business plan or 3-5 page summary plus financials
 - Resumes of company principals
- Presentation to incubator management and advisors

Range of Companies

1. Green, socially responsible, sustainable
2. Start-up, early-stage, local
3. Large companies seeking local presence
4. For- and not-for-profit
5. Diverse sectors - IT, architecture, consulting, media, marketing and distribution
6. Products/Services - energy efficiency, transportation, environmental stewardship, planning, design, neighborhood revitalization and recycling



Company Profiles

- **14 Companies**
 - Two not-for-profit; One cooperative
 - Three full-time resident firms; Seven at 10 hrs/wk; Four virtual
- **Most early stage firms, 1-3 years old**
- **Diverse sectors represented**
 - Five companies in energy efficiency; Two companies in environmental conservation; Four in green services; Two in healthy food-related businesses; One in transportation
- **All but four actively selling products or services**

Range of Companies

- **Savenia Labs**
 - Independent testing laboratory
 - Energy and environmental impact ratings on popular appliances
 - Produce information labels and ratings
- **E-Car Solutions**
 - Electric Vehicle (EV) charging station infrastructure
 - Turn-key solutions include feasibility studies, engineering design, government approval, charging station sales, maintenance, repair
- **Aquabarrel**
 - Water conservation and storm water management education
 - Rainbarrel products and accessories
 - Retail, web and channel sales

Range of Companies

- **Wi-Fi Relativity**
 - Wireless internet and energy management solutions
 - Partnerships and systems integration
 - Residential, commercial and school buildings
- **Mark Leisher Productions/Green Road TV**
 - Environmental films for web and select television stations
 - Corporate and full-length feature films
- **Green Savings Co-op**
 - Collective buying discount program for members
 - Home energy analysis, weatherization, solar hot water and electricity, geo-thermal, heating and air conditioning, green design and building/remodeling

Full Service Facility

1. Facility and shared resources
2. Office furniture including desks, chairs, shelves, cubicles, filing cabinets and whiteboards
3. Sustainable center design from in-kind contributions from local supporters
4. Broadband wireless internet
5. Local phone service (extra fee)
6. Utilities, heat, light, and power
7. Facility management

Full Service Facility

8. Staffed reception and information area
9. Incoming mail and package handling
10. Security
11. Conference rooms
12. Kitchen area, including refrigerator, microwave and coffeemaker
13. Fax, copiers and A/V equipment



1. Active Management
 - Part-time Incubator Manager
 - Support from Executive Director, Communications Director
2. Technical Expertise and Counseling
3. Business plan development
4. Marketing, promotion through website and press
5. Access to professional services firms, including accounting, financial and legal
6. Monthly speaker program



Professional Services



7. Partnerships for internships, technology transfer and technical assistance
8. Introductions to potential strategic partners
9. Semi-annual progress reviews
10. Networking and events
11. Help with regulatory compliance
12. Peer-to-Peer Guidance

1. Montgomery County,
Department of Economic
Development
2. Chamber of Commerce
3. University of Maryland
and local Colleges
4. Small Business
Development Center
(SBDC)
5. Other



1. Multiple Pricing options (US\$)

- Virtual \$200/month
- 10 hours/week \$250/month
- 20 hours/week \$450/month
- Full-time \$750 - \$925/month

2. Revenue

- 2010 \$28,700
- 2011 \$52,500 (projected)

3. Expenses (2011)

- Rent \$0; provided in-kind by Capital One Bank
\$22/sqare foot x 4,000 = \$88,000
- Staff ~ \$60,000
- Miscellaneous ~ \$5,000

Challenges and Barriers

1. Evolving sector during economic downturn
2. Raising capital is difficult
3. The „Green Economy’ heavily influenced by policy
 - Government impacts both supply and demand
 - Political debate often debilitating
4. Limited government resources (local and national) inhibits growth
5. Limited space for full-time incubator companies

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Incubator Results

- Six companies hired total of 16 employees
- Extensive support provided through contractors (30+) and interns (30+)
- Seven companies increased revenue at least 30 percent in 2010
- Over 20 partnerships formed
- Operation improvements in financial and accounting controls, legal and payroll
- Refined marketing plans and initiatives, including websites, trade shows and referral networking

Lessons Learned

1. Flexibility is ingrained in culture
2. „Local’ focus increases supply AND market demand
3. Broad industry focus (vs. technology) is strength
4. Private sector role is important
5. Need creative opportunities for financing
6. Strategic partnerships provides strong leverage
7. Non-profit structure encourages community engagement

Livability Project



**BRINGING SUSTAINABLE
COMMUNITIES TO LIFE**

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- 1. Where we are today:**
 - Relationship with Bethesda Green
 - Consulting
 - Education/Workshops
 - Building Tools
- 2. Where we are going:**
 - Replicating framework in other Cities



“We can’t solve problems by using the same kind of thinking we used when we created them.”

~ Albert Einstein

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ESSENTIAL OIL as Bio Additive

A new Innovative Product

Green Product

Presented by

Jodi Sucipto
INDONESIA

COMPANY PROFILE

- Company Name : PT.Bio Pacific Energy
Year of establishment : May 2009 in Jakarta, Indonesia.
Contact address : Jl.Taman Pahlawan Kalibata 8
Jakarta 12760 Indonesia.
Tel. +62 21 7974111
Fax. +62 21 7988847
Email : pacificenergy@ymail.com
- Producer of Bio Additive for petrol dan diesel fuel.
- Customers
Automotive users (retail market)
Coal mining, Marine transportation (industrial market)



BACKGROUND

- Nowadays, about 80% of energy consumption used by human beings relies on fossil fuel.
- Increase of per capita energy consumption vs fossil fuel depletion potentially leads to world energy crisis.
- The use of fossil fuels in transportation and industries emits harmful pollutants, resulting in the deterioration of environmental quality.

BACKGROUND

- Energy saving and environmental protection become important issues in sustainable development.
- Fuel additive proposes an alternative in fuel optimization design.
- Bio additive is a kind of renewable biomass that has high degradation rate and the low greenhouse gas emission that meets environmental standards.

ESSENTIAL OILS

- Essential oils are widely used as aroma and flavour enhancers, cosmetics, pharmaceuticals, and aromatherapy, however some of the essential oils now can also be used for Bio Additive.
- Essential oil consists of Carbon(C), Hydrogen(H), Oxygen(O), Nitrogen(N).
- Have chemical composition similar to petrol and diesel fuel.
- Biodegradable.
- Environmental friendly.



THE ADVANTAGES OF USING ESSENTIAL OILS AS BIO ADDITIVE

- Oxygenated fuel, so it supplies more oxygen for fuel combustion.
- Free of fatty acid content, thus avoid carbon deposit.
- Bio Detergency ability
- Low water content
- Bio degradable
- Oil soluble
- Raw materials used are not food crops



Bio Additive OCTANE-N[®] & CETROL-N15[®]

- Consist of various of essential oils.
- Bio Additive for petrol fuel and diesel fuel.
- Can be used for motor vehicle, bus, Truck, Power plant, Boiler, Dozer, Excavator, Marine transportation.

Product tested by : Research and Development Centre for Oil and Gas Technology(Lemigas) Indonesia.

Direction for use :

- Mix with composition : 1ml Bio additive to 1 liter fuel.



PRODUCT CHARACTERISTICS

CATALYST

Enhance perfect combustions in engine chamber.

DETERGENCY

Cleansing and keep clean entire fuel system.

ENVIRONMENT FRIENDLY

Reducing exhaust emission.



FUNCTION OF BIO ADDITIVE

- Enhance perfect combustions in engine chamber.
- Cleansing and keep clean entire fuel system from carbon deposit.
- Recover power performance.
- Reducing engine temperature.
- Reducing exhaust emissions.
- Saving fuel consumption in average 20%.
- Cost saving on engine maintenance.

Cetrol-N15[®]

Bio Additive DIESEL TREATMENT



- **PRODUK INOVASI YANG TELAH TERUJI SECARA LABORATORIUM DAN PENGUJIAN LAPANGAN**

Merupakan Bio Additive untuk BBM solar yang bahan bakunya terdiri dari beberapa minyak Atsiri / essential oil (nabati).

- Bahan baku utama Citronella Oil (C₁₀ H₁₈ O)
- Memiliki sifat fisika & kimia mirip dengan BBM
- Biodegradable
- Tidak mengandung sulfur dan senyawa aromatik (ramah lingkungan)
- Formula telah melalui pengujian di lapangan lebih dari 10 tahun



NO FLAMMABLE

Telah dilakukan pengujian di



Syarat & Ketentuan Berlaku

Octane-N

Petrol treatment





SOCIO ECONOMIC IMPACT

- Bringing more economic value with the utilization of non productive land.
- Poverty alleviation through essential oil crop farming.
- Dispersion of wealth to remote areas that produce essential oil crop.
- Reducing national fuel consumption.
- Reducing exhaust emission.



THE COMPANY VISION AND STRATEGY

Vision

- Bringing up essential oils to communities as part of energy strategy and actively preserving environment.

Strategy

- Starting from automotive user and broadening to mining industry and marine transportation.



CHALLENGES AT START UP ENTERPRISE PHASE

MARKET

Convince market as a new product.

PRODUCTION

Preparing stock of input materials for product up scaling.

INVESTMENT

Attract and convince investor.



THE STRATEGIES TO EXPAND THE MARKET

PHASE I

- Starting from automotive user, launched product in small package of 30 ml.

PHASE II

- Penetrating industrial market segment (mining, marine transportation).

PHASE III

- Partnership with fuel industry (bio additive blend in fuels)



POTENTIAL BUSINESS PROSPECTS OF BIO ADDITIVE IN INDONESIA

Year 2010 Indonesia

- Total Local consumption = 40 Mill kiloliters
- Assumption
- Market share 10% = 4 Mill kiloliters
- Total Bio additives needs = 4 Mill liters
- Total value
4 Mill liters x USD 23.5 = USD 94 Mill
- Margin Profit
35% x USD 94 Mill = USD 32.9 Mill

TRICKLE DOWN ECONOMICS

- Utilizing non productive soil = 27.000 Ha
- Empowering farmers = 135.000 persons
- Additional farmers income = USD 297/month

Marine transportation



Coal mining Industry



PT. Bio Pacific Energy

Coal mining Industry



PT.Bio Pacific Energy

Power plant



PT. Bio Pacific Energy

Cleansing carbon deposit

