



# Intellectual Property and Climate Change: Financial Challenges to Innovation

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**Regional Workshop on Intellectual Property and Public Health  
and Environment Policy for Asia and Pacific Economies**

**10-12 July 2012, Kuala Lumpur, Malaysia**

# Malaysia's Green Technology Policy

## Among the Objectives:

- Increase national capability and capacity for innovation in GT development and enhance Malaysia competitiveness in GT in the global arena.
- Key Focus Areas:

Energy

Building

Water & Waste  
Management

Transportation

# Scope of Intellectual Property in Climate Technology

IP	Underlying Technology	Instances of Applications
Patents	Mechanical Engineering	Biomass burner Biogas Collectors/bottlers
	Electrical Engineering	Biomass electrification POME Electrification
	Chemical Engineering	Biogas process Fertilizer process Fermenter
	Biotechnology	Fermentation of biofertilisers POME
Trade Secrets	Biotechnology	Fermentation Formulation (e.g. biomass ingredient)

# Barriers to Innovation in Green Technology

- Economics
- Institutional
- Policy
- Human Capital

# Government Research / Technology Grants

Types of Fund	Amount	Project Scope
Technofund	RM1.5 – 3.0 mil	<ul style="list-style-type: none"><li>▪technology development, up to pre-commercialisation stage</li><li>▪Include IP Preparation and Registration in Malaysia Only</li><li>▪Priority Areas include Biogas and Biofuel, Biomass energy technology, Sea Level Changes, Solar, Wind, Water Resource Management</li></ul>
Science Fund	up to RM500,000	<ul style="list-style-type: none"><li>▪R&amp;D projects that can contribute to the discovery of new ideas &amp; the advancement of knowledge in applied sciences, focusing on high impact and innovative research</li><li>▪16/241 projects in 2011</li></ul>

# Observations on Government Fund

- Competitive Bidding
- Emphasis on success and IP
- Long process
- Ends at pre-commercialisation

# Green Technology Funding Scheme

- RM 1.5 billion in the form of 2% interest rate reduction
- Government Guarantee of 60% of the project cost
- Approved GT Value for Financing (RM): 725,355,728.00
- Balance of GT Value for Financing (RM): 774,644,272.00

# Observations on GTFS

- Funding subsidy on Project, not on the IP or innovation
- Funding on GT components only
- Subsidise the interest rate, not on whole project
- Double jeopardy
- May use local or foreign technologies



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# Case study: Biomass Fueled Burner/ Boiler System

# Background

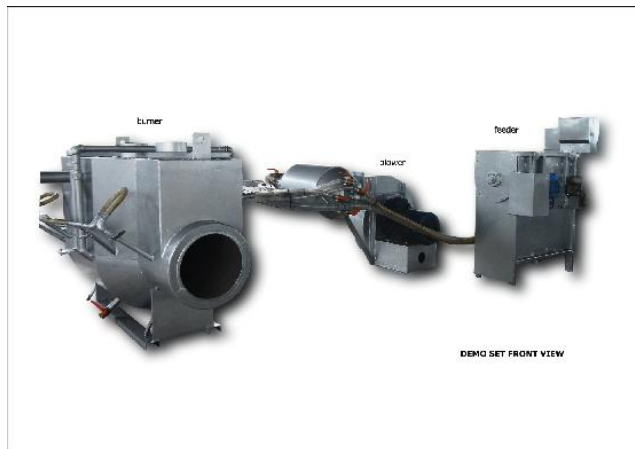
- SME Company based in Chemor, Ipoh, Perak
- Recipient of GTFS and applicant for Technofund
- GTFS for expansion of burner system with biomass fuel
- Technofund for adaption of biomass burner system into boilers

# Concept and Product

## Self-Combustion Patented System with Biomass Fuel

- Generating temperature from 80°C to 1,250°C
- Biomass fuel, it is a fine/blend powder that aids the firing system.

The Burners with Supporting Machineries



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Pulverized Materials









# Green Technology Expenditure

Item	Total
Green Technology Component Approved under the Green Technology Funding Scheme	RM11,741,000
Overall Project Cost	RM25,000,000
CO2 emission saving in based on current customers	95000 kgs/ per annum
Patent Registrations	Malaysia, Thailand, China
Pre-com application under MOSTI including fund for new patents	RM2,600,000

# Observations

- High initial R&D cost from internal funding (RM250,000 on the development of patent alone including registration fee etc)
- Continuous R&D expenditure (RM400,000 for a new prototype)
- Patent and IP are key for motivation for continuous innovation
- MOSTI grant and GTFS provide partial support
- Human capital is key

# Conclusion

- Technology funding is key for innovation and IP development in green technology
- High investment leads to potential high licensing cost
- High cost is barrier to technology uptake and utilisation in developing and LDCs.



Thank You

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