

# 《Green Finance Implementation Guidebook – Food and Beverage Industry》



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## Chapter 1. 《Green Finance - SME Self-Assessment Guide》

### A. Background

#### 1. Definition of Green Finance

The regulatory details of green finance in Hong Kong are similar with those in the Mainland. Except for listed green bonds which are regulated by the Listing Ordinance, green loans are administered by financial institutions in accordance with the licensing ordinances and requirements of The Hong Kong Monetary Authority (HKMA). The HKMA is committed to promoting green and sustainable finance to address the risks of climate change. The HKMA considers climate change to be one of the major risks to human well-being. How the banking and financial systems operate clearly has an impact on how climate change risks are managed and mitigated.



The HKMA will promote green and sustainable banking in three phases.

- Phase I: Establish a common framework with the industry to assess the current Greenness Baseline for banks. The HKMA will also work with international organizations to provide technical support to local banks on the principles and methods of conducting "green checks";
- Phase II: Consultation with the industry and other stakeholders on the regulatory expectations or requirements for green and sustainable banking, with a view to establishing a set of specific objectives for enhancing the green and sustainable development of the banking sector in Hong Kong;
- Phase III: Once the objectives have been established, implement, review and evaluate the banks' progress in this area.

The HKMA is asking the banking industry to analyze the impact of climate change on them, implement timely countermeasures, and accelerate the development of green business. The HKMA is actively participating in international forums to support the global development of green finance. As a member of The Network for Greening the Financial System (NGFS), the HKMA participates in the Network's working groups on how to integrate climate risk and other green and sustainability factors into regulatory frameworks and macro-monitoring.

The banking industry has responded positively to the HKMA's initiative to expand the focus of green finance from large listed enterprises to non-listed enterprises and even SMEs and will introduce policies and products to facilitate SMEs' access to loans. With the support of green

finance, SMEs can develop new green businesses or improve the environmental performance of their products and business processes, which will not only increase their business volume and revenue and reduce the cost of production or service delivery, but also build a green brand and expand their customer base to companies or consumers who are concerned about environmental protection and climate change.

Hong Kong Institute for Monetary and Financial Research (HKIMR), established by the HKMA, released a report on November 24, 2020, entitled " The Green Bond Market in Hong Kong: Developing a Robust Ecosystem for Sustainable Growth ", an applied finance study. The report describes the current state of the green bond market in Hong Kong and globally and illustrates the benefits of green bonds for issuers and investors. Among the findings, existing market participants identified the strengths of the Hong Kong market as a large pool of international investors, supportive policies, the presence of many socially responsible issuers, and the implementation of transparent ESG disclosure. 71% of existing issuers surveyed and 100% of existing investors surveyed said they plan to participate in Hong Kong's green bond market in the future. SMEs can follow the trend of green finance and seize the opportunity of green capital from investors to prepare for green projects and help their business development.



China has provided a guiding and clear view on the definition of green finance, which will not only affect the orientation of green business and capital investment priorities of domestic financial institutions in Hong Kong. It can also provide a good definition of green finance. The People's Bank of China (PBOC) and the China Banking Regulatory Commission (CBRC) jointly promulgated the "Opinions on the Implementation of Environmental Protection Policies and Regulations to Prevent Credit Risks", which stipulates that environmental protection departments, PBOC, CBRC and financial institutions at all levels should put the State Council's implementation of the decision and environmental protection policies and regulations on their important agenda. Strengthen the cooperation and linkage between environmental protection and financial supervision departments, promote credit security by strengthening environmental supervision, support environmental protection with strict credit management, strengthen economic restraint and supervision of enterprises' environmental violations, raise the awareness of environmental rule of law in the whole society, promote the completion of energy conservation and emission reduction targets, and strive to build a resource-saving and environment-friendly society. It also stressed the need to strictly monitor the environment and credit management of new projects in accordance with the requirements of environmental laws and regulations. In addition, the environmental

protection departments at all levels strictly approve the environmental impact assessment of construction projects and strengthen the management of environmental protection facilities in construction projects. "Environmental Protection Law," Article 41 came into force on 1 January, 2015 to supplement the construction of pollution prevention facilities, should be designed, constructed and put into operation at the same time as the main project. Pollution prevention facilities shall comply with the requirements of the approved environmental impact assessment file, shall not be dismantled or idle. The concept of "Three simultaneities" in other green projects also has good reference value.

The above regulations bring out the basic definition of green finance.

1. The enterprises financed must comply with applicable national and local environmental protection laws and regulations to avoid credit risks arising from environmental protection violations;
2. The funds should be used to support environmental protection industries and projects, and should bring benefits to the environment; and
3. To conduct environmental impact assessment and implement "Three Simultaneities" management.



The Hong Kong Quality Assurance Agency (HKQAA), with the support of the Hong Kong Government, launched Hong Kong's self-developed "Green Finance Certification Scheme" in 2018, which includes a definition of green finance and green projects. SMEs can use the information and documents mentioned above to prepare green projects to meet the requirements of financial institutions.

## 2. Green Standards

With regard to the second definition of green credit, the guiding catalog of green industries listed in the circular issued by the PRC National Development and Reform Commission, the People's Bank of China, the Ministry of Industry and Information Technology and other departments on February 14, 2019 - "Circular on the Issuance of the Guidance Catalogue of Green Industries (2019 Edition)" (發改環資 (2019) No. 293) provides a suitable reference for the industries in which green finance is to be used.

As for assessing whether the use of loans by enterprises supports environmental protection projects, industries and projects that support environmental protection are generally referred to as eligible green projects in the capital market. The International Capital Market Association's Green Bond Principles (GBP) and the Loan Market Association's Green Loan Principles (GLP) provide the same indicative categories of eligible green projects. Compared to the existing national entities and international principles, the main difference between the People's Bank of China's Bulletin [2015] No. 39 Annex "Green Bond Support Project Catalogue" issued in 2015 and the GBP/GLP is the clean use of coal.

## **B. Evaluation Process**

### **1. Purpose of self-assessment**

Green Finance Self-Assessment is an assessment exercise conducted by enterprises or their delegates in accordance with these guidelines and using the tools provided by the Green Finance Knowledge Sharing Online Platform.

The purpose of the self-assessment is to help SMEs understand whether they can finance their businesses through green finance, so that they can continue to grow their businesses while making some contribution to the environment and climate change. It involves three levels, including the readiness of the company's policies and capabilities, the rationale for supporting green projects, and the risk management of implementing the projects. Each dimension has different assessment focus and assessment items as follows.

Layer	Evaluation Highlights
<ul style="list-style-type: none"> <li>• Readiness of the company's policies and capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Company Sustainable Development Strategy</li> <li>• Sustainable Development Foundation Culture</li> <li>• Promoting Sustainable Development Results</li> </ul>
<ul style="list-style-type: none"> <li>• Rationale for the Green Project</li> </ul>	<ul style="list-style-type: none"> <li>• Use of Funds Raised</li> <li>• Estimated Environmental Benefits</li> </ul>
<ul style="list-style-type: none"> <li>• Execute project risk management</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Compliance</li> <li>• Ability to complete green projects</li> </ul>

### **2. Preparation for self-assessment**

Before conducting the self-assessment, SMEs need to clearly identify the environmental laws and regulations that apply to their business and ensure that they are in compliance with the relevant requirements. In addition, collect (1) the technical specifications and indicators of the green project for which green funding is desired and (2) the practical experience of previous projects that are the same as or similar to the green project.

### **3. Login to the Green Finance Knowledge Sharing Online Platform ([www.greenfinance.hk](http://www.greenfinance.hk))**

4. Activate the Green Finance Self-Assessment Tool

*a) Corporate sustainability strategy, including*

- The linkage between the company's development and the solution of today's important environmental issues; and
- The company's written commitment and plan for sustainable development.

*b) A culture of sustainability fundamentals, including*

- Internal communication of the importance of environmental protection to the business; and
- The level of employee recognition of and participation in corporate sustainability.

*c) Past achievements in promoting environmental protection, including*

- Results of environmental benefits achieved (e.g., carbon footprint, water footprint, energy consumption, pollutant emissions, waste/waste reduction, etc.); and
- Measurement of environmental benefits achieved.

*d) Use of proceeds, including*

- Green project attributes; and
- Dedicated funds.

*e) The environmental benefits expected to be generated upon completion of the project, including*

- Environmental benefit key performance indicators (KPIs); and
- Measurement of the environmental benefits to be generated.

*f) Environmental compliance, including*

- Compliance management; and
- Compliance performance

*g) Ability to complete green projects, including*

- Project experience;
- Personnel capacity and skills; and
- Environmental impact assessment





## Chapter 2. 《Green Project Selection and Evaluation and Green Technology Details》

### A. Environmental Challenges Facing

In today's food and beverage industry, there are different environmental challenges every day, and in many cases, environmentally harmful by-products are inadvertently produced during the transportation or preparation process.

In terms of environmental concerns or impacts, the three main ones are as follows:

#### 1. Generation of Food Waste

Food waste can be generated from kitchens or eating places, but the types may vary, for example, food waste in kitchens may include expired ingredients or those thrown away due to disposal errors, while in eating places, it is mainly leftover food or disposable seasonings. When decomposed under the soil, methane gas is produced, which, when not properly handled, will emit methane and exacerbate the greenhouse effect; sewage is also produced and leaks out under the soil into the ground waterways, causing public health problems.

To tackle the challenge of food waste in Hong Kong, the Government issued "A Food Waste and Yard Waste Plan for Hong Kong 2014-2022" ("Food Waste Plan") and "Waste Blueprint for Hong Kong 2035" ("Blueprint") to map out the strategies for food waste management.

Reference:

[https://www.epd.gov.hk/epd/english/environmentinhk/waste/prob\\_solutions/food\\_waste\\_challenge.html](https://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/food_waste_challenge.html)



#### 2. Disposable Tableware Generation

Greenpeace visited McDonald's, the leading fast-food company, and calculated that during breakfast and lunch alone, McDonald's dispenses nearly 490,000 disposable plastic products every day, which is equivalent to the height of 168 buildings in the International Finance Center (IFC).

Leading food delivery companies in Hong Kong, Deliveroo and foodpanda signed an

industry-wide commitment today to be a part of WWF's Plastic ACTion Initiative (PACT) to reduce the use for single use plastic. The pledge signing ceremony took place at WWF Central Visitor Centre. This is a major sectoral push for the industry to work collectively towards the common vision of No Plastic in Nature by 2030. The two companies, representing over 90% of the food delivery industry, pledged to team up with WWF-Hong Kong to set up measurable actions to engage restaurants and consumers with the aim of removing all unsustainable packaging by 2025 and to establish a more circular economy for plastic in the city.<sup>1</sup>

Purchasing biodegradable tableware or providing reusable tableware to avoid the use of disposable styrofoam tableware is also a legal and regulatory direction for the future, which will be discussed in depth later in this guide.

Reference:

<https://www.wwf.org.hk/?23761/Press-Release--Leading-Food-Delivery-Companies-in-Hong-Kong-Team-Up-With-WWF-to-Combat-Plastic-Crisis>

### 3. Wastewater Discharge

Water is used in all aspects of food preparation and cooking, for washing vegetables, defrosting frozen foods, etc., resulting in wastewater. In general, wastewater from restaurants and other commercial food service facilities is very different from residential wastewater. In addition to higher surge volumes and often higher temperatures during busy periods, restaurant wastewater is generally more intense than residential wastewater. This is due to higher levels of oil, grease and food, resulting in higher biochemical oxygen demand (BOD).

When oil and grease liquefy at the high water temperatures used for dishwashing and subsequently solidify in the sewer or soil absorption system surface, they can physically clog soil pores and cause problems, preventing water infiltration and the free transfer of oxygen needed to digest the waste. Grease traps can only remove wastewater grease to a limited extent. Excess oil and waste must be minimized in the wastewater. These wastes can be disposed of as normal kitchen waste and not discharged into the waterways. The EPD will not rigidly require the type of grease removal equipment or technology to be installed when processing the industry's application for a discharge license. The industry can consider installing appropriate grease traps or other grease removal equipment or technology to meet the discharge standards required by law, taking into account their own factors such as the volume and quality of effluent generated and the available space to match the effectiveness of the facilities.

Reference:

<https://www.barnstablecountyhealth.org/resources/publications/compendium-of-information-on-alternative-onsite-septic-system-technology/grease-and-oil-in-restaurant-wastewater>

### 4. Energy Use

In addition to the use of water, combustion is the main source of energy needed for cooking, and many Chinese restaurants pay close attention to the size of the fire, as it affects the

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<sup>1</sup> <https://www.wwf.org.hk/en/news/?23761/Press-Release--Leading-Food-Delivery-Companies-in-Hong-Kong-Team-Up-With-WWF-to-Combat-Plastic-Crisis> (viewed October 2021)

taste of the food. The size of the fire or its cooking time, or even its cooking efficiency, will determine how much energy is consumed, and gas and LPG are not renewable energy sources. If we can reduce energy consumption, we can not only protect the environment, but also reduce operating costs. The following will introduce the innovative green technology project - the pre-mixed energy saving stove.

## **B. Green Project Selection and Evaluation**

Choosing to purchase environmentally friendly tableware or using a pre-mixed energy efficient stove as a green project has its own merits. The following is a more in-depth analysis of the two examples cited above as a guide to selecting or evaluating green projects.

### **1. Legislation**

In July 2021, the Environmental Protection Department released a consultation paper proposing the Scheme on Regulation of Disposable Plastic Tableware. The Administration proposes to prioritize the control of disposable plastic tableware by banning the sale of plastic tableware in Hong Kong and banning the provision of disposable plastic tableware to customers in food and beverage premises.

As for other non-foamed plastic disposable tableware, the plan proposes to control them in two phases. In the first phase, the provision of plastic disposable tableware to dine-in customers will be banned, while the provision of plastic disposable drinking straws, stirring sticks, forks, knives, spoons and plates will be banned for take-out. In the second phase, the regulation of take-out will be on par with that of dine-in to reduce the use of plastic disposable tableware at source, so as to reduce the impact of plastic pollution on the ecological environment and human health, and to help reduce carbon emissions and mitigate climate change.

In terms of kitchen emission control, the cooking process in Hong Kong is regulated by the Air Pollution Control Ordinance in terms of oily fumes and odors. Owners and operators of restaurants and catering establishments must take appropriate measures to ensure that visible fumes and unpleasant odors are not emitted, and that high-efficiency odor control equipment is installed if the emissions have a strong odor or are in close proximity to receptors that are sensitive to air pollution, contributing to existing or impending air pollution. Pre-mixed energy-efficient furnaces here significantly reduce NOx and CO2 emissions, thereby making it easier to meet legal requirements.



## 2. Technology Aspects

In July 2021, Foodpanda announced the launch of an all-plant fiber take-out packaging series in Hong Kong, helping more than 12,000 local restaurant partners to reduce plastic from take-out packaging at a discounted price, and to promote sustainable development.

Many eco-friendly tableware are made of bamboo or sugar cane fiber, and then add edible water and oil repellent, and can be microwaveable or refrigerated after production. However, the disadvantage is that it will become soft when it is filled with hot water. With today's technology, eco-friendly tableware can generally be returned to nature in a zero-pollution form after disposal. This is because the products are 100% biodegradable and compostable.

On the other hand, for the windproof structure of the premixed energy stove, it protects the flame of the gas burner from being dispersed by the ambient air flow in the kitchen environment, which is a key design feature of the premixed energy burner, where pressurized air and design is achievable with today's technology. A covered chimney, firebrick, and swinging faucet are also easy to configure parts.

## 3. Investment Return

The use of eco-friendly tableware can certainly reduce waste production. Although the purchase cost may be higher, it can be considered an effective green promotion in a climate of increased public awareness of environmental protection. Under the influence of the new pneumonia, the take-out business of many restaurants has increased, and the use of green take-out tableware will certainly attract a group of environmentally conscious customers. Sometimes, not providing any take-out tableware may not be suitable for all situations.

Pre-mixed energy saving stoves, on the other hand, have a relatively low energy loss because the heat transfer is better protected, so energy use can be reduced and costs can be saved; higher cooking efficiency means lower operating costs.

## 4. Environmental and Social Impact

The plastic tableware avoid waste generation, because of the light weight but large volume of styrofoam, a large amount of styrofoam can only be made into a small amount of plastic raw materials after recycling, resulting in its logistics and recycling operation costs are high; coupled with the styrofoam waste has mostly been contaminated or mixed with other impurities, so the efficiency of styrofoam recycling is relatively low. On the other hand, once styrofoam enters the marine environment, it will float in the sea for a long time and affect the marine ecology. Therefore, the government has been encouraging to reduce the use of styrofoam at source.

The use of pre-mixed energy-saving furnaces reduces the amount of air used for combustion, thus reducing the size of the blower and avoiding noise sources, and the amount of air and fuel used for combustion is reduced, so CO<sub>2</sub> emissions are also reduced.

Reference :

<https://www.info.gov.hk/gia/general/201905/08/P2019050800508.htm>



There are several additional basic factors to consider when choosing a green project:

1. Size of the green project department: The number of members or staff determines the size of the green project that can be planned and affects the operability of the project when it is running.
2. Green competitiveness of suppliers: For example, suppliers can improve the quality of supply chain management, increase corporate social responsibility in the supply chain, upgrade the environmental management system of the supply chain, etc.

## **C. Green Technology Details – Disposable Tableware**

### **1. Market Situation**

The Environmental Protection Department released a consultation paper this year proposing a phased implementation of a plastic disposable tableware control scheme to reduce the use of plastic disposable tableware at source in order to reduce the impact of plastic pollution on the ecological environment and human health. The plan proposes a total ban on the local sale of disposable plastic tableware and a ban on the provision of disposable plastic tableware to customers in food and beverage premises, with a target implementation date of around 2025. The plan proposes a two-phase control. In the first phase, a total ban on the provision of all types of disposable plastic tableware to dine-in customers will be implemented, while the provision of disposable plastic drinking straws, stirring sticks, forks, knives, spoons, plates, etc. will be banned in takeaway. In the second phase, the regulation of take-out will be on par with that of dine-in.



## 2. Scientific Background

The foam material is graded according to cleanliness, pure white, non-polluting foam material is the highest grade (A Grade), stained and impurities are the second grade (B Grade), and impurities and black are the lowest grade (C Grade). Although styrofoam is lighter, but the volume indeed occupying more space, greatly increasing the cost of transportation. Not only is it bad for the environment, it is also bad for the human body, styrofoam is made of styrene polymerization, simply put, it is formed by styrene "hand-holding". The polystyrene held together is harmless to the human body, but the styrene monomer is toxic and can damage the central nervous system, kidneys and liver, poor quality styrofoam, easy in the manufacturing process of residual styrene monomer, which poses a threat to the human body. In addition, styrofoam is not resistant to high temperatures and acids, and temperatures above 75 to 95 degrees Celsius will have a bad taste and deformation, and the acidity of lemons and oranges will corrode styrofoam. Moreover, most styrofoam is not suitable for microwave ovens, and its negative impact on human body is no less than melamine. On the contrary, the environmentally friendly tableware sold in the world nowadays is made of polylactic acid. PLA is one of the ingredients decomposed from corn starch and is considered a "green plastic" (biodegradable) product, which can be easily decomposed after disposal and does not cost much to recycle.

Reference :

<http://ggraphic.com/g/Right/FaPaoJiao.html>

## 3. Advantages

Compared to styrofoam, eco-friendly tableware is not only easier to dispose of after disposal, but also different in the manufacturing process, which does not require the use of petroleum, thus saving energy and reducing carbon dioxide emissions.

The use of eco-friendly tableware in restaurants can show the green characteristics of the brand and will attract more customers' willingness to spend.



#### 4. Cost Requirements

A restaurant manager who switched to environmentally friendly take-out tableware lamented that the cost of environmentally friendly tableware is at least twice as high as disposable plastic tableware, but if it is combined with the promotion of BYO tableware, the total cost will be reduced. Many restaurants are now including the cost of expensive cutlery in their prices, but many customers are still willing to pay the extra cost in the hope of helping the environment. The cost of eco-friendly materials will be the same as the current plastic tableware after mass production, and restaurants can consider using incentives or charges to encourage less use of disposable tableware, which will help solve the problem at the root.

### **D. Green Technology Details – Green Kitchen (Pre-mixed Energy Stove)**

#### 1. Market Situation (Existing Technologies and Pain Points)

Hong Kong has a population of 7.5 million, boasts over 16,000 eateries,<sup>2</sup> which range from local favorites to high end fine dining outlets. In 2019, Hong Kong restaurant food and beverage generated estimated sales of \$14.42 billion and Chinese cuisine is the top grossing restaurant category, according to Hong Kong Census and Statistic Department. Chinese restaurants utilize quite complicated culinary skills in delicately controlling the cooking process by varying the heat, temperature and duration. Many dishes require large quantities of oil or lard, usually heated to high temperature in a wok by Chinese commercial cooking range. In Hong Kong, town gas (TG) or liquid petroleum gas (LPG) are normally used as fuel in Chinese cooking stove using single nozzle-mixing burner. Unlike domestic stove at home, Chinese cooking stove in commercial kitchen burn large quantity of fuel, put over ten times more heat than domestic stove during cooking activities such as stir-frying, griddling and stewing, generating large amount of cooking fume, odor, vapor and heat and many kinds of carcinogens was reported to be found in cooking fume.<sup>3</sup> For many middle and small scale commercial kitchens in Hong Kong, the indoor air quality and thermal environment are far worse than

<sup>2</sup> “Consumer Food service in Hong Kong”, 2020, Euromonitor International

<sup>3</sup> Weng, M.L.; Zhu, L.Z.; Yang, K.; Chen, S.G. *China, Journal of Hazardous Materials*, 2009, 164, 30



acceptable level. Cooks generally expose to such hot and noxious environments<sup>4</sup> for more than 4 hours per day, which contributes to productivity loss, employee turnover, and eventual loss profits for the restaurant operators.



*Figure 1: Stir-frying cooking generates large amount of heat, odor, cooking fume and vapor*

Chinese cooking stove in commercial kitchen uses open combustion, air blowing type gas burner for stir-frying to achieve “wok hei” which requires intense heat approaching temperatures to about 300°C.<sup>5</sup> **Figure 1** shows photos of stir-frying cooking in wok. Cooking flame leaps high above the gas burner and embraces the whole wok. Cooks momentarily lift the wok from the cooking flames and toss cooking flames into wok. Food is thrown up to the sides of the wok where the dry extreme heat do most of the cooking.

However, the energy efficiency of many conventional commercial Chinese cooking stoves is less than 15% due to the following problems:

- 1) Cooking flames in open combustion generates high temperature flue gas (> 200°C). When large volume of high temperature flue gas is discharged into the surrounding environment, cooking efficiency of conventional Chinese stove reaches less than 15%,<sup>6</sup> causing thermal environment of kitchen worsened.
- 2) There is no wind protection structure (**Figure 2**), surrounding airflow in kitchen scatter the cooking flame which increase heat loss to the surrounding environment.
- 3) Loss of fuel gas which is carried away by high pressure airflow in the air blowing type gas burner before it is completely burnt.

<sup>4</sup> Livchak, A. *ASHRAE Transactions*, **2005**, 111, 748

<sup>5</sup> <https://www.scmp.com/lifestyle/food-drink/article/3044804/asian-food-why-do-masterchef-and-other-cooking-shows-only-show> (visited in September **2021**)

<sup>6</sup> <https://www.scmp.com/article/538300/new-gas-burner-built-wok> (visited in September **2021**)



*Figure 2: Stove without wind protection structure is inefficient and dangerous for stir-frying cooking*

New technologies including gas pre-mixing device and wind protection structure can improve the energy efficiency of commercial Chinese cooking stove.

In Chinese commercial kitchen, large amount of heat, cooking fume and odor generated need to be removed promptly in order to maintain a safe, comfortable and productive working conditions. Four important elements affect indoor thermal comfort, namely air temperature, air humidity, air velocity and thermal radiation. Meanwhile, cooking fume and odor should be captured and prevent them from spreading throughout the kitchen.<sup>7</sup> However, conventional commercial kitchen exhaust hood either could not effectively capture and remove air pollutants, or it increases air ventilation rates, consuming huge energy and high operation cost. With the latest Air Curtain Ventilation (ACV) technology, which is based on impinging jet ventilation<sup>8</sup> and Coanda effect,<sup>9</sup> the capture and containment efficiency can be as high as 86%.

## 2. Scientific Background

In Green Kitchen concept, here are the green technologies involving in the commercial Chinese cooking stove:

### a) Pre-mixed energy saving burner

In **Figure 3**, town gas (from channel 8) and pressurized air (from channel 2) are pre-mixed in 3 (lower part of mixing chamber 13) according to the pre-determined proportion.<sup>10</sup> The mixture is jet through the pre-mixing chamber with air flow swirling central by i) channel 6 and upward ii) channel 2. The pressurized air and fuel gas thus create an upward spiral airflow in the mixing

<sup>7</sup> Kosonen, R.; Koskela, H. *Energy and Building*, **2006**, *38*, 1141

<sup>8</sup> Karimipannah, T. *Royal Institute of Technology, Sweden, PhD Thesis 1996*, pp26-35

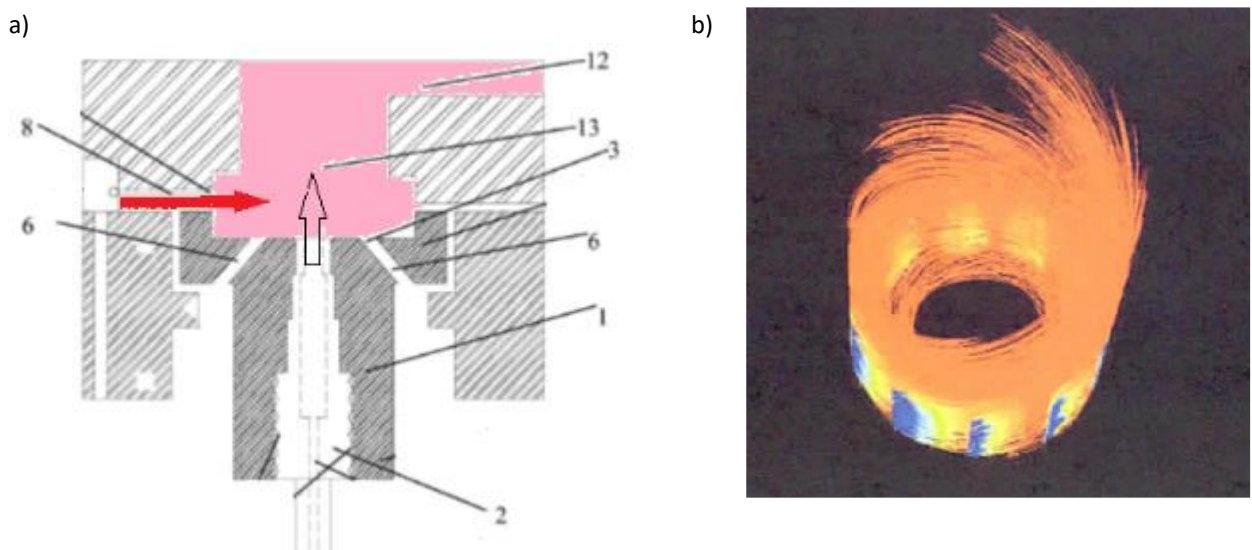
<sup>9</sup> Boscoianu, M.; Prisecariu, V.; Circiu, I. *Science & Military Journal*, **2010**, *5*, 26

<sup>10</sup> Wu, J.F.; Fu, X.Y.; Zhu, Y.H.; Zhou, H.X. *Advances in Engineering Research (AER)*, **2016**, *117*, 450

chamber 13 which is essential and helpful in fuel gas and air mixing. The gas mixture is further flow to the combustion zone 12, creating cylindrical shape mixing which has longer retention time to be burnt in the combustion zone.<sup>11</sup> Therefore, the utilization ratio of fuel gas can be largely improved without being blown away by the pressurized air before it is burnt. The energy efficiency comparison between the conventional Chinese cooking stove and the pre-mixed type cooking stove were measured to be 18% and 31% respectively.



*Equation 1: Chemical combustion reaction of methane (one of the components in Town gas)*

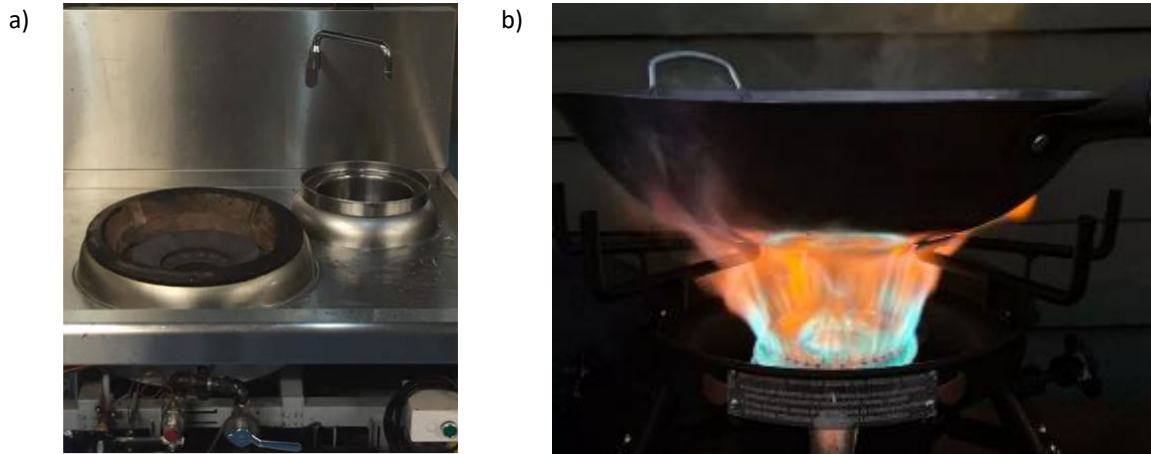


**Figure 3a)** Schematic diagram for the pre-mixed town gas and air design;  
**Figure 3b)** A cylindrical mixing shape of town gas and air located below the mixing chamber 13

b) Wind Protection Structure

According to the rule that high temperature gas will flow upward, heat carrying flue gas outlet is located at the upper end of the gas recovery cavity. As shown in **Figure 4**, the deep well design not only can guarantee sufficient combustion space but also protect the flame of the gas burner from scattering by surrounding air flow in kitchen environment. Furthermore, the high temperature flame and flue gas after the combustion can conduct sufficient high exchange with wok and other cooking utensils. A well-mixed fuel gas and air can create a center and stable combustion flame which heat the bottom of cooking utensil in a concentrated way through the outer flame with the highest temperature.

<sup>11</sup> Yiu, H.M. 2015, CN Patent number: CN104696959

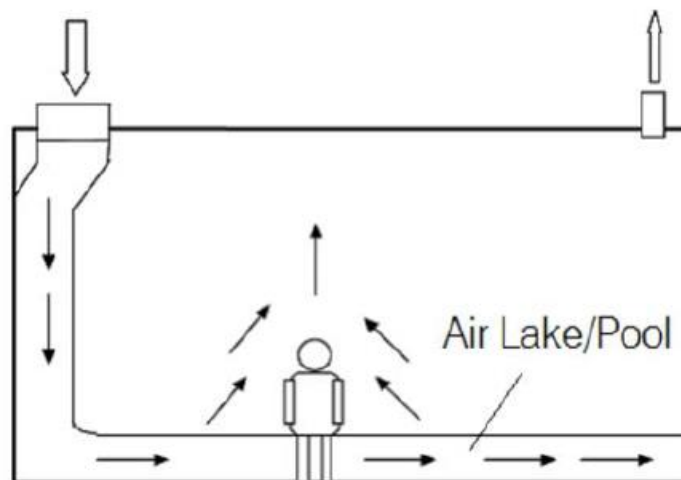


**Figure 4a):** Deep Well Design protects the burner flame scattered by surrounding airflow;  
**4b)** A centered, stable, concentrated flame makes it great for stir-frying

Here are the green technologies involved in the ventilation part of the green kitchen.

*a) Air Curtain Ventilation*

In a typical Chinese commercial kitchen, especially without an effective mechanical air supply system, thermal displacement ventilation (TDV) was reported to improve the efficiency of kitchen exhaust hoods due to a reduction in the turbulence inside the kitchen. Similar to the TDV, the ACV takes advantage of the Coanda effect by short distance between the supply jet inlet and the adjacent wall as shown in **Figure 5**. As the high-speed jet flows downward towards the floor, it strikes the wall-floor corner, separates from the wall and reattaches to the floor surface. The resulting flow from the ACV forms an air lake phenomenon over the floor. ACV has higher momentum than wall displacement ventilation but produces a similar flow field to the TDV system.

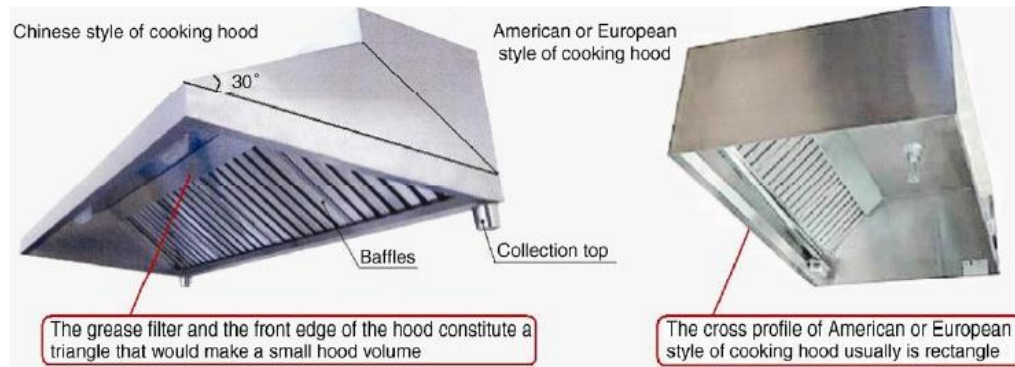


**Figure 5:** Schematic Diagram of Air Curtain Ventilation

*The advanced combustion stove includes pressurized air input device, gas inlet, the lighter and the ignition tunnels.*

b) Kitchen Exhaust Hood

Although there are many types of kitchen exhaust hood with various hood shapes. Side panels can improve the capture efficiency of traditional Chinese style cooking hoods, especially when the kitchen exhaust hood is located at higher positions. As shown in **Figure 6**, American or European style of cooking hood, usually larger with rectangle shape is relatively expensive. However, it was found that increasing hood volume did not improve capture performance. In addition, when the exhaust opening is located at the rear of the hood, the hood capture efficiency also increases.



*Figure 6: Two typical types of cooking hood with different volume*

### 3. Benefits

a) Environmental

- Can create better working environment for cooks with less heat loss to the surrounding
- Improve thermal efficiency and achieve energy saving
- With effective fuel gas and air mixing, reduce the amount of air for combustion. The size of air-blower can be reduced and eliminate the source of noise
- Lower NO<sub>x</sub> and carbon dioxide emission

b) Energy and Cost

- Higher cooking efficiency and reduce the operation cost
- Cost saving and better return for investor

#### 4. Key Functions & Specifications



*Figure 7: Energy Saving Chinese Cooking Range: Flame-Mate*

The pre-mixed energy saving stove is designed with some highlighted features (refer to **Figure 7**):

1. innovative pre-mix burner
2. one press ignition switch
3. chimney with cover
4. tabletop and wok ring
5. fire brick
6. swing faucet



*Figure 8: Case 1 -- Single head advanced combustion stove from MegaPro*



Figure 9: Case 2 -- Double head advanced combustion stove from Flame-Mate

	Case 1	Case 2
No. of wok ring	1	2
Gas Rating (kW)	28.8kW	48kW x 2
Thermal Efficiency	>38%	30.1%
CO Emission	0.004ppm	<0.01%
Dimensions (mm)	1100 x 1050 x 810	2200 x 1250 x 810

#### 5. Show Case(s)

The following section showcases a cost-benefit analysis of a middle-sized Chinese restaurant (~2000 sq.ft) that is planning to utilize the pre-mixed energy saving stove to achieve green kitchen while saving fuel cost.

*[Assuming 3 conventional stoves (56kW) are to be replaced.]*

Replacement cost of 3 (Initial Investment):

Items	Comment	Estimated cost
Pre-mixed energy saving stove	HKD 25,800 * 3	HKD 77,400
Cost of removal (old stoves)	HKD 2,000 * 3	HKD 6,000
Cost of installation (new stoves)	HKD 2,000 * 3	HKD 6,000
Residual value of old stoves	HKD 4,000 * 3	(HKD 12,000)
	<b>Total:</b>	<b>HKD 77,400</b>

Annual Savings (Periodic Revenue):

According to the performance test study from Mega Pro Ltd, the advanced combustion stoves can reduce ~40% - 50% fuel consumption while producing same number of dishes and with similar cooking time. It is assumed that **45%** of fuel cost is reduced after the stove replacement in this calculation.

Items	Comment	Annual Estimated Savings
Fuel cost reduced	Each conventional stoves consumes: 56kW x .25(15mins/hr) x 6hr x 30 days = 2520kw 2520kW x 3.6 = 9072MJ 9072MJ x \$.255(average) = \$2313/month Annual Fuel cost reduced 3 x HKD 2,313 * 45% * 12 months = HKD 37,470	HKD 37,470
	<b>Total:</b>	<b>HKD 37,470</b>

Payback period:

$$\frac{\text{Estimated Cost}}{\text{Annual Estimated Savings}} = \frac{\text{HKD 77,400}}{\text{HKD 37,470/year}}$$

= 2.07 years



## Chapter 3. 《Building a Green Finance Framework & Green Technology Application Notes》

### A. Background

The International Capital Markets Association (ICMA) published its first Green Bond Principles in 2014, which included the overall environmental, social and governance framework of green bond issuers as one of the issues that investors in green bonds may consider. In June 2018, the Green Bond Framework appeared in the External Review section of the Green Bond Principles, recommending an external review to confirm that an issuer's green bond framework is consistent with the four core components of the Principles. The Green Bond Framework was further identified as a key recommendation to improve transparency by recommending that issuers summarize relevant information in the context of their overall sustainability strategy and the four core components of the Principles. Overall, there are five key recommendations for an issuer's green finance framework, namely, company profile, use of proceeds, process for evaluating and selecting projects, management of proceeds and reporting.



### B. Details of the Green Financial Framework

#### 1. Company Profile

In order to introduce a company to investors or those who may be interested in its green projects, it is important to remove the concerns of stakeholders about "greenwashing". According to Investopedia, a U.S. website, greenwashing is defined as "the process of conveying a false impression or providing misleading information about how a company's products are more environmentally friendly. Greenwashing is a claim that lacks evidence to deceive consumers into believing that a company's products are environmentally friendly. Green financing can be a marketing tool to build a company's green image, but it is critical to ensure that a strong link is established and maintained between green finance initiatives and the company's overall sustainability strategy. It may seem difficult to establish such a strategy and require professional advice, but it can be put into simple terms. This linkage can directly and easily describe how sustainability is one of the key success factors in achieving a company's long-term business success.

The ability to generate business ideas, control operating costs and build reputation are key elements of the small and medium-sized enterprise (SME) survival toolkit, and it should not be difficult to find good reasons to associate green projects with them. Food and Beverage Industry

SMEs can look to industry pioneers such as McDonalds to develop their sustainable development strategies.

Since 2012, McDonald's has started using high-efficiency LED lighting in phases across its operations. This has cut our carbon dioxide emissions by over 2 million kg annually, equivalent to the total amount of carbon dioxide absorbed by about 90,000 trees every year. McDonald's supports the Environmental Protection Department's Plastic Shopping Bag Charging campaign and donates all charges collected to the collaborative platform formed by the Conservancy Association, Greeners Action and Green Power for promoting Bring Your Own Bag and supporting waste reduction projects. strive to reduce the use of plastics, including replacing plastic cups for the McFlurry with paper ones. We have phased out foam containers and have replaced them by paper ones. All foam packaging have been eliminated by the third quarter of 2018. McDonald's is the first restaurant group to participate in the Environmental Protection Department's Rechargeable Battery Recycling Program, providing convenient battery collection points across our extensive restaurant network. In collaboration with a waste oil recycling company approved by the Environmental Protection Department, McDonald's converts waste oil from all restaurants into usable energy such as biodiesel. McDonald's has also received the Friends of EcoPark Award from the Environmental Protection Department for eight consecutive years.

Reference :

<https://www.mcdonalds.com.hk/en/social-responsibility/green-operations/>

In order to upgrade the hardware to conserve and uplift resource efficiency in the outlets, the Environmental and Equipment Task Force is in charge of introducing innovative and new eco-materials and equipment for resource optimization. Fairwood uses electricity, Liquefied petroleum gas ("LPG") and Towngas as the main energy sources for cooking. In view of the long operating hours of CFPP and outlets, the electricity use for our daily operations is relatively high. The Environmental and Equipment Task Force is therefore appointed to improve energy efficiency by optimising energy use. Although there was no issue in sourcing water, we remain vigilant to conserve water as to relieve the global concern of freshwater depletion. Equipment Task Force has introduced the unique design of a new defrost sink to water usage; and installed a new design of electric bain marie in the outlet kitchen leading to up to 40% of water reduction. Fairwood focuses on improving waste management approach. We take initiative to turn waste into valuable resources through proper segregation and recycling as well as reducing single-use materials.

Reference :

[https://www.fairwoodholdings.com.hk/tch/investor/images/AnnualReports/ESG%20Reportc\\_2019\\_2020\\_20201020.pdf](https://www.fairwoodholdings.com.hk/tch/investor/images/AnnualReports/ESG%20Reportc_2019_2020_20201020.pdf)

Maxim's Group is committed in environmental protection and understands the rising concern of plastic pollution. Taking to heart our customers' needs and preferences while minimizing the environmental impact, the Group is taking active steps to reduce single-use plastic. All Maxim's Cakes and arome outlets have stopped providing cake-cutting plastic knives, plastic utensils/ items and extra plastic bags to customers, unless requested. The Group will also launch a Green Birthday Campaign on social media to encourage more sustainable lifestyles and invite public to join tree planting. In addition to its efforts to plastic reduction, Maxim's Group has rolled out various other environmental initiatives. In terms of turning waste to energy, the Group recycles used cooking oil from over 280 of its restaurants for turning into B5 biodiesel to power its fleet of over 100 trucks to reduce carbon footprint. Maxim's Cakes & Bakery Production Centre

also collects and delivers egg shells, fruit peel and pits to O-Park 1 in Siu Ho Wan, where they are transformed into sustainable biofuels. Furthermore, the Surplus Bread Donation program has donated over 4.75 million pieces of bread since its launch in 2009, to people in need and helping them save on daily expenses.

Reference :

[https://www.maxims.com.hk/en/about/cat\\_01\\_d\\_sub01\\_press.asp?id=163](https://www.maxims.com.hk/en/about/cat_01_d_sub01_press.asp?id=163)

## 2. Use of Proceeds

In order to implement the sustainability strategy described in the previous section, it is necessary to describe the types of eligible green projects that the Company wishes to qualify for the use of the funds raised. The list of eligible green project categories is a core part of the first core component of the Green Bond Principle (GBP) and the Green Loan Principle (GLP). Eligible green projects should have clear environmental benefits that are evaluated by the company and, where feasible, quantified, measured and reported.

Typical examples of the types of eligible green projects related to the logistics sector as listed in GBP and GLP.

- Renewable energy (including production, transmission, appliances and products).
- Energy efficiency (e.g. new and renovated buildings, energy storage, district heating, smart grids, appliances and products).
- Pollution Prevention (including air emission reduction, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling, and energy/emission efficiency waste).
- Clean transportation (e.g., electric, hybrid, public, rail, non-motorized, intermodal, clean energy vehicle infrastructure, and hazardous emissions reduction).
- Green buildings that meet regionally, nationally or internationally recognized environmental performance standards or certifications.

The description of restrictions on the use of proceeds is also expected to be stated in the Green Finance Framework. Typical restrictions are that the funds raised may not be placed on the IFC's published exclusion list (Reference : [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/company-resources/ifcexclusionlist](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/company-resources/ifcexclusionlist) )



### 3. Process for Project Evaluation and Selection

After identifying the types of eligible green projects, the next step is to evaluate potential green projects against a set of selection criteria that will help the company apply the funds raised to the projects desired by the company and the investors/lenders. The purpose of this section of the Green Finance Framework is to provide investors/lenders with detailed information on the environmental sustainability objectives of eligible green projects, the process of evaluating and selecting potential green projects, and the process of identifying and managing the social and environmental risks expected to be associated with the evaluated green projects. Typical details on related topics can be found in the following table:

Topic	Typical Content	Remark
Responsibility	The evaluation of the technical and quality characteristics of the project can be provided by the supplier or contractor, and the SME operator can make the final approval.	Cross-functional groups (if applicable) are desirable, but not required.
Environmental efficiency KPIs (KPI)	Typical KPIs include annual electricity generation (kWh per year), annual electricity savings (kWh per year), reduction in air emissions (mg/kg km), fuel savings (liters per km), and green certification.	There is expected to be a clear link between the environmental benefits of qualifying green projects and the company's overall sustainability goals. Where possible, KPIs can be translated into an annual reduction in greenhouse gas emissions.
Environmental Risk	Conduct environmental impact assessments in accordance with applicable regulatory requirements or internal methodological requirements to identify and mitigate significant risks related to environmental aspects (pollution of air, soil and water,	Significant risk may mean that the risk will lead to legal violations and objections in the public domain.

	solid waste, noise and depletion of natural resources).	
Social Risk	Conduct environmental impact assessments in accordance with applicable regulatory requirements or internal methodological requirements to identify and mitigate significant risks related to the welfare and well-being of the community (population displacement, unemployment, and occupational health and safety issues).	Significant risk may mean that the risk will lead to legal violations and objections in the public domain.
Investment Return	Where applicable, the project savings over time can be estimated and used to calculate the return on investment.	In addition to saving money, environmental benefits are also a key factor in determining returns.
Process	The self-assessment mechanism and selection criteria described in Chapter 1 can be used.	Selection rules may define a minimum self-assessment score for eligible green projects and/or all eligible projects are prioritized for selection based on the self-assessment score until funds are used.

#### 4. Management of Proceeds

In order to allay investor/lender concerns about the actual use of the proceeds, particularly the placement of proceeds in non-qualified green projects that could affect the Company's ability to complete qualified green projects, it is necessary to explain how the utilization of the proceeds will be controlled and tracked. Temporary use of uncommitted proceeds is permitted, but the proceeds can be withdrawn if necessary, to ensure that progress on eligible green projects is not compromised. The types of investments that should be made available in the green finance framework for temporary use of proceeds.



## 5. Reporting

Regular updates on the use of funds raised are expected to be the minimum requirement, with typical reporting intervals being once a year. In addition to the return on investment, environmental benefits are the most expected return on green finance projects. The GBP and GLP describe the value of transparency in communicating the expected impacts of the project. For investors/lenders to understand the progress of eligible green projects and the achievement of Key Performance Indicators (KPIs), the description of project monitoring in the Green Finance Framework will provide more confidence to investors/lenders. Further guidance on project management and project monitoring is provided in the next chapter.

As carbon neutrality is at the top of the investor/lender agenda, the ability to report on the project's impact in terms of carbon emissions is another feature that may be welcomed by investors/lenders. Translating KPI results into carbon reductions is one thing, another challenge is to measure these results without spending too much resources and effort on data measurement, collection and calculation. Therefore, it is recommended that smart metering and automated systems be used to report impacts and carbon emissions, and that these costs can be included in the funding of eligible green projects.

## C. Green Technology Application Notes

### 1. Green Kitchen – Main Application

#### a) Water Boiling Test

Cooking energy efficiency is a typical indicator showing that the performance of Chinese Commercial cooking stove. In comparing the conventional and pre-mixed energy saving stove, the conventional stove recorded 18% while pre-mixed type stove recorded 31% in Water Boiling Test (WBT).

#### b) Sit-Frying and Deep-Frying Cooking

Typical stir-frying and deep frying cooking using standard cooking procedures carrying out by professional chefs were compared between conventional and pre-mixed energy saving stove. The cooking procedures of Frying Vermicelli with Beef and Deep Frying Tofu are summarized below:

#### Cooking Procedures of Frying Vermicelli with Beef

Step	Description
1	Deep frying of beef
2	Frying of spring onion, onion and beansprout
3	Frying of vermicelli with beef, spring onion, onion and beansprout
4	Addition of favor and finishing the frying
5	Transferring vermicelli to dish and washing of frying wok

#### Cooking Procedures of Deep-Frying Tofu

Step	Description
1	Dip fresh Tofu into the frying powder
2	Adding the Tofu into wok and finishing the deep frying

3	Transferring Tofu to dish
---	---------------------------

In carrying out the two cooking processes of Frying Vermicelli with Beef and Deep Frying Tofu using pre-mixed energy saving stove, the town gas required to prepare 10 dishes of Frying Vermicelli with Beef and 10 dishes of Deep Frying Tofu were of 35.7ft<sup>3</sup> and 55.0 ft<sup>3</sup> respectively. Comparing with using a conventional cooking stove, the pre-mixed energy saving stove consumed only half of the energy cost.<sup>12</sup>

## 2. Environmental-Friendly Tableware – Main Application

In Hong Kong, all Green Restaurants accredited by the Green Council have committed to at least one of the following green initiatives, including green purchasing (e.g. promoting vegetarian food/local ingredients/sustainable ingredients/organic ingredients/use of green cleaning agents), energy conservation (e.g. using energy-efficient lighting or equipment), water conservation (e.g. using water-efficient appliances), waste reduction and recycling (e.g. using food service outlets/supporting plastic removal/not providing disposable tableware / participate in food waste or used cooking oil recycling / sort recyclables / participate in food donation / go paperless). Through this program, the company can compare itself with industry benchmarks, increase its corporate value, help to write sustainability reports, attract potential investors, and build its brand image, demonstrating its efforts and contributions to sustainability.

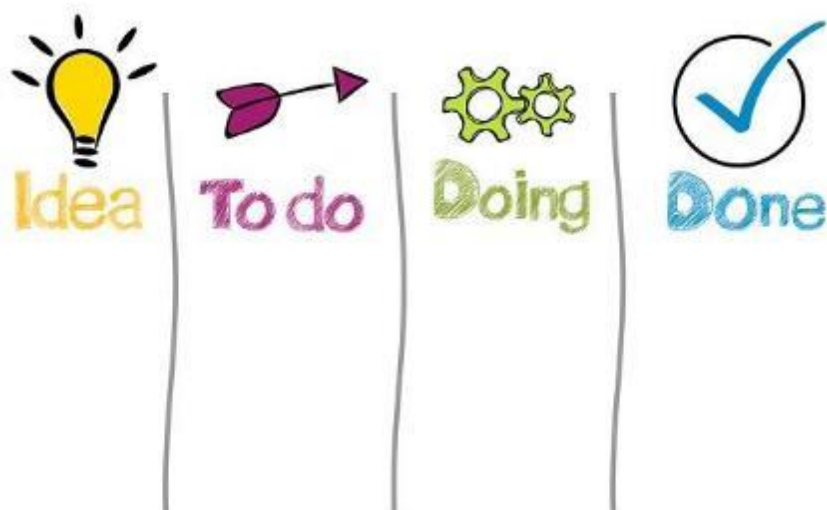


<sup>12</sup> Yeung, L.L. “Final report for cooking stove performance Test” Mega Pro Co. Ltd. 2015.

## Chapter 4. 《Green Project and Fundraising Management & Green Technology Operation and Maintenance》

### A. Background

Green projects have the same characteristics and risks as other types of real-life projects, and every green project should be managed properly to ensure that it produces the desired results. In 2020, the International Organization for Standardization (ISO) published the international standard ISO 21502 to provide guidance on project management. Project management is described in the standard as "the coordinated activities that guide and control the achievement of consistent objectives" and further elaborates that "project management is necessary for the execution of a given project through a series of processes and methods that include systematic design and practice". The key themes to be discussed in this chapter will be the agreed objectives and the systems to achieve them.



### B. Green Project Management and Fundraising Management

#### 1. Key Performance Indicator (KPI)

First, project objectives and KPIs should be defined. In the direct capital market, investors/lenders place great importance on KPIs linked to environmental benefits, and expected returns are as important as repayment. When defining KPIs for eligible green projects, it is important to understand the company's overall sustainability objectives and the concept of environmental benefits. ICMA, the International Capital Markets Association, published a "Handbook - Harmonized Framework for Impact Reporting" in June 2021 for setting metrics for eligible green projects (reference): <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf>. The Handbook can provide SMEs with useful guidelines and examples to determine the appropriate KPIs for their projects. In addition, it is important to map the results of eligible green projects in relation to the UN-advocated Sustainable Development Goals (SDGs) (ref: <https://sdgs.un.org/goals>) to showcase projects that ICMA has published the "Green, Social and Sustainable Development" bond: High Level Mapping of SDGs June 2020, where SMEs can find useful tips for mapping their eligible green projects to SDGs. Typical examples are :



Qualified Green Projects	KPI	SDG
Using Reusable Tableware	<ol style="list-style-type: none"> <li>1) Annual Reduction of Waste (tonnes)</li> <li>2) Greenhouse gas emissions reduced/avoided per year (tonnes of CO2 equivalent)</li> </ol>	SDG7 Affordable Clean Energy
Using Pre-mixed Energy Saving Stove	<ol style="list-style-type: none"> <li>1) Annual fuel saving energy (GJ)</li> <li>2) Greenhouse gas emissions reduced/avoided per year (tonnes of CO2 equivalent)</li> </ol>	SDG7 Affordable Clean Energy

## 2. Evaluation and Selection of Green Technologies

Since eligible green projects involve green technology, SME staff who understand the technical details need to know information about the compliance, feasibility, benefits, reliability, timing and lifecycle, and operational requirements of the equipment involved in each project. The information is then evaluated by the SME owners and their staff responsible for finance, operations, and sales and marketing.

It is critical for SMEs to identify operational risks and determine whether they can be managed to a reasonable level in terms of legal and financial liabilities. SMEs need to be prepared to meet the challenges of investors/lenders regarding the reasons for choosing green technology. SMEs need to be aware of the possible options in the market and justify their decision that "business as usual" or compliance with legal and regulatory compliance may not be welcome.



## 3. Project Planning and Monitoring

To demonstrate an SME's ability to execute green projects, a well-thought-out project plan is required. Given the small size of eligible green projects for SMEs, a simple project plan with a list of tasks and control points, assignment of responsibilities and timeline is sufficient.

Project Name:	Pre-mixed Energy Saving Stove Green Kitchen			
Project Reference Number:	GF_2021_GK			
Project Members:	Peter, Paul, Mary			
Jobs	Output	Responsible person	Start Date	Completion Date
Project Launch	Project plans, specifications, project monitoring report forms	Paul	2021.6.1	2021.6.7
Procurement of equipment and construction services	Quotations	Mary	2021.6.9	2021.7.14
Quotation evaluation (Control Point 1)	Equipment and Contractor Services	Peter, Paul, Mary	2021.8.1	2021.8.5
Project kick-off meeting with suppliers and contractors (Control Point 2)	Method statements and drawings, equipment lists, test plans and test acceptance criteria for functional testing, operation and reliability	Peter, Paul, Mary	2021.8.21	2021.8.23
Equipment Testing (Milestone 1)	Equipment Test Results	Peter, Paul, Mary	2021.10.15	2021.1.5
Installation Engineering	Installed premixed burner, ignition switch and covered chimney	Vendors and Contractors	2021.10.22	2022.1.30
Complete installation test (Milestone 2)	Installation test results	Paul	2021.11.15	2022.2.10
Equipment testing and installation supervision	Notes for reporting at project supervision meetings	Paul	2021.10.15	2022.2.10
Quarterly project monitoring meetings (Control Point 3)	Follow-up and improvement measures	Peter, Paul, Mary	2021.9.1	2022.2.15

An effective project monitoring mechanism will further gain investor/lender confidence and should ensure that the project is on the right track and that project tasks and milestones are completed as planned. If delays or quality issues arise, immediate remedial action will be required.



The following table provides details of a typical project monitoring report:

Project Monitoring Report				
Project Name:	Pre-mixed Energy Saving Stove for Green Kitchen		Project Reference Number:	GF_2021_GK
Responsible Person:	Paul		Commencement Date:	2021.6.1
Monitoring Distance:	Every two months		Project Completion Period:	2022.2.15
Monitoring Schedule	Executive	Satisfactory progress?	Output Satisfaction?	Questions, corrective measures and follow-up of results
2021.8.1				
2021.10.5				
2021.12.3				
2022.1.3				

#### 4. Fund Raising Management

Typical management is to keep the proceeds in a dedicated account and record all incoming and outgoing transactions in a register of proceeds. This requires a staff responsible for compilation and verification. An example of a book of proceeds is as follows:

Fund Raising Capital Register			
Green Finance Reference:	GF_2021		
Amount of registered capital raised:	HK\$10 million		
Qualified Green Projects 1:	Pre-mixed Energy Saving Stove for Green Kitchen	Project Reference:	GF_2021_GK
Qualified Green Projects 2:	Reusable Tableware Purchase	Project Reference:	GF_2021_EU

Date	In、 Out	Marker Reference	Trading Instructions	Amount
July 2, 2021	In	GF_2021_1	First drawdown of funds raised	3,000,000
July 2, 2021	Out	GF_2021_3	Fixed Deposit	1,000,000
July 5, 2021	Out	GF_2021_GK_1	First Installment for 5 no. of Pre-mixed energy saving stove	500,000
July 10, 2021	Out	GF_2021_EU_1	Reusable Tableware Purchase	50,000

Producers: Mary

Verifiers: Paul



### C. Green Technology Operation and Maintenance Manuals

The use of green technology is bound to have a series of operational needs and occasional damage situations, so a procedure or code of practice needs to be developed that includes dealing with unexpected events.

If a gas leak is suspected, take the following actions immediately:

- Immediately close the gas emergency control valve, which is usually located near the gas meter/LPG meter.
- Do not smoke or use lighters/matches or other igniters.
- Do not turn on or off any lights or switches, i.e. never turn lights or switches "On" or "Off".
- Open all windows and doors to keep the air inside.
- If the smell of gas persists, leave the unit immediately.

To prevent food from burning and catching fire, do not leave the stove unattended while cooking. A good premixed energy efficient stove is designed with an automatic flame failure safety device. The system will cut off the gas supply to the burner when the burner is accidentally extinguished due to rolling food or strong winds.

