

Engagement in community development or sustainable social solutions
through business processes

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“Fry to Fly” and “No Refry” projects

Collecting used cooking oil from the community to produce Sustainable Aviation Fuel (SAF) that reduces carbon dioxide emissions by up to 80% and prevents the reuse of used cooking oil, reducing health problems. This helps the environment by reducing blockages in drainpipes. People also gain additional income. Furthermore, SAF is a sustainable, renewable energy source which not only contributes to clean energy but also helps with economic and social matters. It aligns with the goals of the BCG Economy Model.





The current situation.

- Thai people consume the oil 1,000 million liters per year.
- 250–300 million liters of oil left over from frying per year.
- The remaining oil is the source of “Reused cooking oil”
- “Reused cooking oil” has undergone physical and chemical changes.
- Transforms into harmful compounds, posing hidden dangers to consumers.
- Disposing of used cooking oil thrown out of the drain without proper management negatively affects water sources



Reused frying oil is oil that has been subjected to high heat repeatedly until it deteriorates.

The generation of harmful compounds includes:

Polar compounds, Polycyclic Aromatic



Dumping used oil into the sewer will cause **blockage**, Causing anaerobic fermentation in the water source and microorganisms cannot exchange nutrients. These things cause **water pollution**.



Problem Statements :

- Consuming the reused oil is unhealthy and causes disease.
- Disposing of waste oil into public sewers can affect the environment
- Citizens/households income is not enough to cover expenses

Community Benefits :

- People are aware of their health and have adjusted their cooking oil consumption behavior.
- Collect used cooking oil correctly. Do not throw it into public areas to reduce environmental impact and sell it to Bangchak to create more income for households.

- Responding to the growth of the aviation industry
- Addressing the needs of the BCG economy that are interconnected with the community and society.
- Response to sustainability goals to promote a low carbon society



Bangchak Corporation Public Company (Limited) implements

"fry to fly" and "no refry" projects

This project involves purchasing used cooking oil (UCO) from households to produce sustainable aviation fuel (SAF) along with campaigning for oil use behavior (no refry) and managing households' oil after use correctly. In addition, it promotes additional income from selling used cooking oil.

Collaborate with :



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bsgf

bangchak

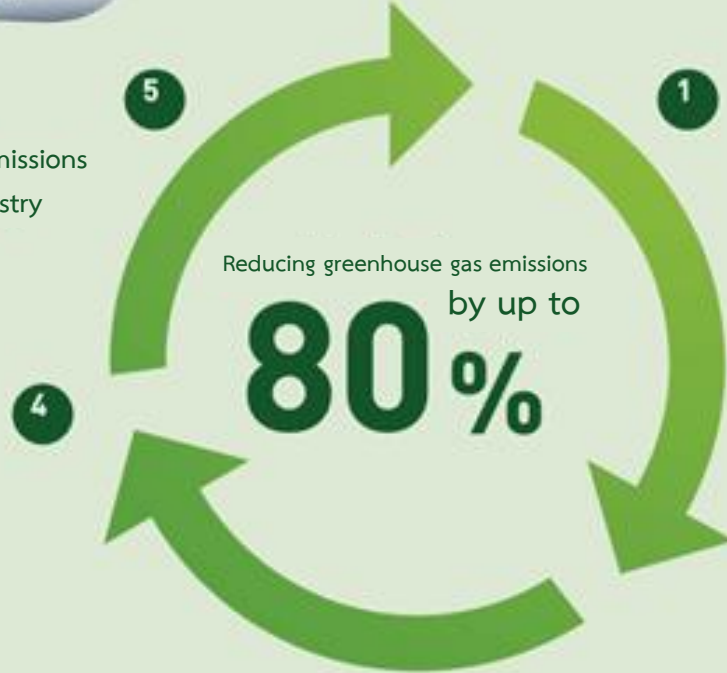


Reduce greenhouse gas emissions from the aviation industry

Replaced without adversely affecting the engine.



Blend with general aviation fuel (the maximum proportion not exceeding 50%)



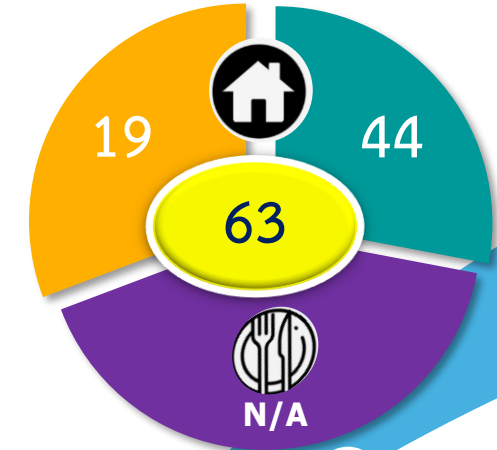
Used cooking oil



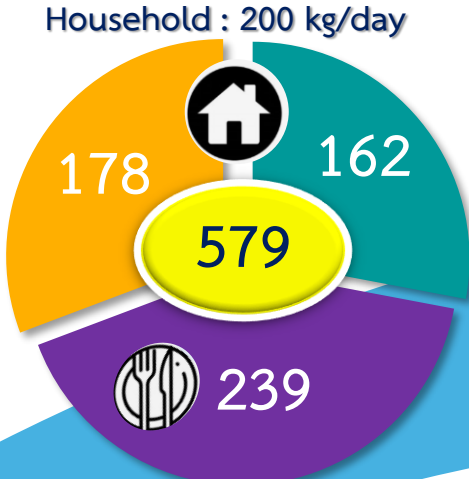
Entering process to produce SAF

Used cooking oil collection network (community, society)

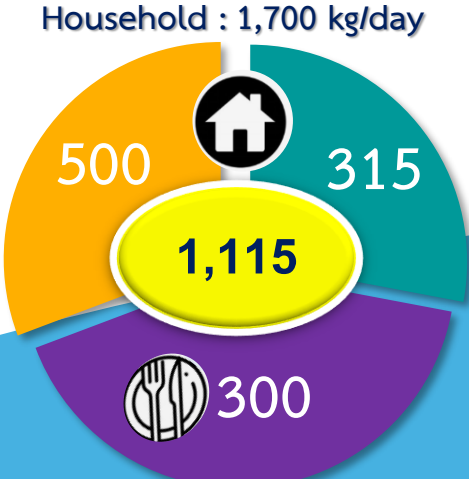
Number of Not Refry Project networks (places)



A.D. 2022



A.D. 2023



A.D. 2024

Household sector : 50000 kg/month

Network accumulation	2022 accumulated amount	2023 accumulated amount	2024 (Accumulated target)
Community groups (Received from the household sector)			
- Bangchak service station	44	162	315
- Community (Housing Authority)/Partners (Individual)	19	178	500
Entrepreneur group (Received from food/industry operators)			
- Partners (legal person)	-	239	300
Total (places)	63	579	1,115

Opportunity to develop project networks

- connections with partners, provide comprehensive logistics nationwide, and reduce transportation costs.
- Enhance public awareness by collecting the used vegetable oil from the household sector.



Project strategy

Targets/Indicators within 2024

1) Expanding the network for collecting used cooking oil nationwide, including entrepreneurs and households.

- The network receives used cooking oil through various channels, focusing on the household sector through the network.
 - 162 Bangchak service stations
 - 239 organizations (legal entities)
 - 178 partnerships (individuals)
- There is a plan to expand the network for purchasing used cooking oil from households to cover the entire country. The collection target is at least 50,000 kg/month.

2) Promoting sustainable consumption along with raising the quality of restaurant entrepreneurs who care about consumers.

- Entrepreneurs who have received 170 certificates aim to raise the quality of food preparation that cares about consumers and in progressing of expanding the certification network to at least 2,000 small entrepreneurs and government agencies.

3) Developing a circular economy curriculum: Fry to Fly stations in educational institutions (Collection of used cooking oil through Bai Mai Pan Suk Foundation)

- Establish the Fry to Fly station and promote the No Refry campaign in at least 60 schools, aiming to collect at least 30,000 kg/month of used cooking oil from households by 2030.
- A training course content will be established and disseminated to more than 30,000 youths by 2030.

Quantity of used oil purchased from household network (retail)

Unit : kg



Quantitative social benefits or returns to the community and society.

Benefits to the community and society.	Result (statistics)
<p>1. Income from selling of used cooking oil.</p>	<ul style="list-style-type: none"> • The network increased by 510 points in 2023. • The value of cooking oil used in 2023 purchased from the network is 1,613,618 THB.
<p>2. Collect and recycle used cooking oil to reduce environmental impact.</p>	<ul style="list-style-type: none"> • By 2023, the amount of used cooking oil collected from the whole network will be 110,279 kilograms, which will help mitigate the blockage of sewers and reduce the occurrence of community flood. • According to the used cooking oil collected in 2023, carbon dioxide emissions have been reduced by 36,215.62 kgCO₂e • Reduce the oil pollution in public area.
<p>3. Reduce the impact of health</p>	<ul style="list-style-type: none"> • Reduce the reuse of frying oil by household and restaurant operators.

Benefits received by the organization.

Benefits received by the organization.	Economic value (statistics)
1. Can provide raw materials (used cooking oil) for production/distribution.	<ul style="list-style-type: none"> Income comes from exports to continental Europe for production as SAF. Preferred SAF products in the region.
2. Reduce the risk of raw material procurement.	<ul style="list-style-type: none"> Increase raw material stability to support a production process capable of processing used cooking oil up to 1 million liters/day.
3. Reduce imports and transportation of waste oil from CLMV countries.	<ul style="list-style-type: none"> Reduce the import of edible oil from CLMV countries by 110,279 kg by 2023.
4. Supporting corporate green innovation business goals.	<ul style="list-style-type: none"> According to the goals of the BCG economic model, promote a sustainable environment and society. Promote Thailand's image aiming to achieve net-zero greenhouse gas emissions by the year 2050.
5. Promote the organization and support a low-carbon society.	<ul style="list-style-type: none"> The media value in news content related to the project In 2022, the total value was 20.45 million baht. In 2023, the total value was 29.67 million baht.

Follow up actions for sustainable community
support projects or contributions to addressing social issues



Expand UCO buying branches
in Bangchak service stations to 162 branches.



Expand the knowledge of waste cooking oil management to the private sector/schools/Subdistrict Administrative Organization.



Expand the customer network of restaurant operators.



Cooperation with the Department of Health of the Ministry of Health: “No Refry” project.



Cooperation with Bangkok: Carry out a campaign to make restaurant operators stop using reused oil and properly manage waste cooking oil.