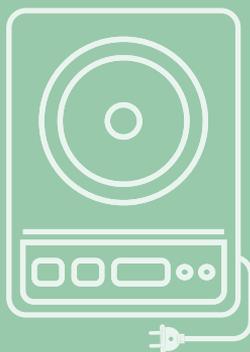




# Lao Electric Cookbook (eCookbook)

Delicious, Smoke-Free and Healthier  
Meals for Lao Population







# Lao eCookbook

for Delicious, Smoke-Free and Healthier Meals

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This Lao eCookbook was developed by  
SNV Laos with funding support from EnDev.

## Disclaimer

This electric cooking guide is intended for general information and guidance only. Users should always follow the specific instructions, user manuals, and warranty conditions provided by the manufacturer of their cooking appliances. Installation, servicing, and repairs of electrical equipment should be carried out only by qualified and trained technicians. The authors and publishers are not responsible for any damages, injuries, or losses resulting from improper use or handling of electrical appliances.



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## Preface

Lao PDR, often called the “battery of Southeast Asia,” generates abundant electricity from hydropower and renewables. With over 95% grid coverage and affordable electricity, the country has strong potential to expand electric cooking.

Despite this, the majority of households continue to rely on wood and charcoal as a primary source of cooking. These fuels cause indoor air pollution and health risks claiming thousands of lives annually, while also contributing to forest degradation, greenhouse gas emissions and climate change.

To address these challenges, the Government of Lao PDR has prioritized clean cooking in its policies and strategies, including the Carbon Decree and Nationally Determined Contributions (NDCs). As a member of the Global Electric Cooking Coalition (GeCCo), it conducted a readiness assessment for the large-scale adoption of eCooking. One key recommendation was to develop an eCookbook to address concerns about cost, taste, and compatibility of eCooking with Lao cuisine.

With support from Energising Development (EnDev), SNV researched the cost of cooking with electricity, carried out blind taste tests, and studied appliance availability and cooking practices.

This eCookbook shares the findings of the research and provides recipes that compare energy use, cooking time, and cost—encouraging households to embrace cleaner, healthier cooking.



***Baburam Paudel***  
Energy Sector Leader  
SNV Laos



## Foreword

On behalf of SNV, I am honoured to present the Electric Cookbook, a significant contribution toward an inclusive and just energy transition and healthier lives for our people.

SNV places the highest priority on advancing clean and modern cooking solutions and supports the Government of Lao PDR to achieve its national targets set out in relevant strategies and policies. With abundant hydropower and other renewable resources, Lao PDR is well positioned to promote the use of affordable electricity in daily life. Transitioning to electric cooking reduces reliance on traditional fuels such as firewood and charcoal, thereby safeguarding forests, mitigating climate change, and improving public health, particularly for women and children who are most affected by indoor air pollution.

This publication demonstrates that electric cooking is practical, affordable, and compatible with Lao culinary traditions. By showcasing familiar recipes prepared with modern appliances, it offers households a clear pathway to cleaner, healthier, and more sustainable cooking practices.

Sincerely,

**Alex Grumbley**  
Country Director  
SNV Lao PDR

# Why an Electric Cookbook (and for whom)?



This Electric Cookbook (eCookbook) aims to promote the adoption of electric cooking (eCooking) in Lao PDR by empowering households with practical knowledge and addressing common concerns, particularly around taste and cost. It aims to showcase the benefits of transitioning to a cleaner, safer, and more efficient cooking method.

The eCookbook introduces traditional Lao dishes cooked with modern, energy-efficient electric appliances such as induction stoves, steamers, electric grills, rice cookers, electric pressure cookers, air fryers, etc. It combines cultural authenticity with modern cooking techniques to preserve the essence of Lao cuisine while embracing innovation.

**This cookbook is not just a recipe collection  
it's a tool for healthier living and sustainable development**

## Benefits of Electric Cooking (eCooking)

By using electric cooking devices, households can enjoy safer and more comfortable cooking experiences, save time and money, and contribute to environmental protection.

This eCookbook helps users recognize these advantages while providing user-friendly instructions to ease the transition.

## The Cookbook Serves to



**Acquaint**  
User with various  
eCooking  
appliances and  
their use



**Highlight**  
Health, economic,  
environmental  
and social  
benefits



**Provide**  
Cost and  
energy  
efficiency data



**Offer**  
Practical  
recipes and  
cooking  
methods



**Address**  
Skepticism  
about electric  
cooking

**“Electric Cooking: No more smoke, no more firewood and charcoal hassles!”**

# 2

## Cooking Practices in Laos

**Traditionally**, a three-stone open fire is used for cooking in most of the rural villages in Lao PDR. This method is inefficient and can contribute to unsustainable usage of biomass, as well as exposing households to hazardous indoor air pollution, putting pressure on the local environment, and placing a burden on those who collect fuelwood, predominantly women and girls.

According to the World Bank’s “Access to Clean Fuels and Technologies for Cooking” indicator, only 10.2 % of Laotians primarily use clean cooking methods in 2022.



Figure-1: A woman cooking indoor on a traditional cookstove, Vientiane, Laos

Thus, about **90 %** or more are **still using traditional solid fuels** such as wood, charcoal and other biomass as their main fuel source for cooking. Data from the 4th national census (2015) indicate that 67% of the households were using firewood and 24% using charcoal. In contrast, only 4% of households use electricity as their primary cooking fuel. The limited adoption of clean cooking solutions is influenced by several factors, including cultural preferences, prevailing perceptions, lack of awareness, restricted market access, and the high upfront costs associated with cleaner technologies.

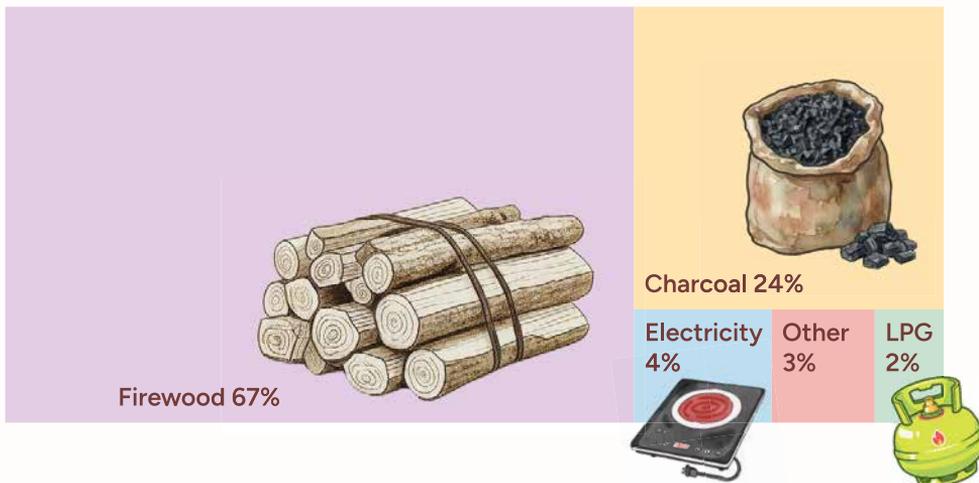


Figure-2: Cooking Fuel Use Scenario in Lao PDR (4th census, 2015)

Households in Lao PDR have been using locally made portable cookstoves with low efficiency besides tripod and three-stone stoves. The common types of stoves are shown in the diagram below.



**Figure-3: Different types of cookstoves used in Lao PDR**

Nationally in 2021, a family consumes 5 kg a day of fuelwood on average for cooking, which amounts to almost 2,000 kg per year. Those using charcoal consume about 1.86 kg a day in rural areas and 2.33 kg per day in urban areas. Typically, households that use firewood also tend to consume charcoal as a fuel source<sup>2</sup>.

1 Tao cement stoves designed for charcoal use are also available. When this stove is intended for charcoal, the front openings are omitted

2 Biomass Consumption and Survey in the Household Sector Ministry of Energy and Mines, Lao PDR June 2021 (Establishment of Energy Statistic Regulation in Lao PDR)

## Problems with Cooking Using Firewood and Charcoal



Unhealthy Smoke:  
Causes coughing,  
breathing problems,  
and eye irritation



Deforestation: Cutting  
trees for fuel destroys  
forests and wildlife



Climate Impact: Smoke  
adds to air pollution and  
climate change



Hard Work for Women: Many hours  
spent collecting firewood every day



High Cost: Charcoal and firewood  
are getting more expensive.



Truck carrying  
charcoal in the  
Vientiane City  
in Laos



Street food  
vendor cooking  
with charcoal,  
Vientiane

# Why Electric Cooking in Laos?

# 3

Shifting from polluting cookstoves to clean cookstoves



PREVENT 7,000  
PREMATURE DEATHS  
EACH YEAR



50% CLEAN COOKING  
ADOPTION CAN SAVE  
2.3 MILLION  
TREES



SAVE UP TO  
1.5 MILLION KIP  
PER HOUSEHOLD PER  
YEAR ON COOKING  
FUEL

BENEFITS  
OF CLEAN  
COOKING



SAVE UP TO  
1 HOUR  
A DAY ON COOKING  
PER HOUSEHOLD



PERFECT TOOLS  
FOR COOKING  
LAO CUISINE



SAFE  
NO FLAMES  
NO SMOKE

Figure-4: Benefits of shifting from traditional cooking method to clean cooking



*Ms. Dao in her kitchen, Vientiane province*

### **No More Smoke, No More Fights**

Mornings used to be stressful for Mrs. Dao, a mother of two living with her husband in Vientiane. Preparing breakfast on a charcoal stove, cleaning dishes, and getting ready for the office always left her sweating and irritated.

The delays and smoke often led to arguments with her husband. “He was helping the kids, I was trying to cook, and we’d end up snapping at each other,” she recalls. “It wasn’t a good way to start the day.”

Although she knew about electric and gas stoves, she never considered them practical for her family. “I thought they were expensive and slow. With charcoal, I could control the fire and add more fuel to cook faster. It felt more reliable,” she explains.

Her mindset changed after attending a Smoke-Free Village event organized by the EnDev project, where she saw a live cooking demonstration using an induction stove. “I was amazed to see different Lao dishes cooked on electric stoves,” she says. “At first, I wasn’t planning to buy one, but when I heard about the incentive, I thought—why not give it a try?”

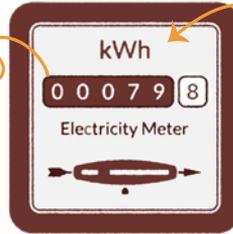
Once she started using the induction stove, her perception shifted completely. “Just press a button and start cooking—wow! I felt in control. No heat, no smoke, and I could easily adjust the temperature. Most importantly, I could get ready for work while the food was cooking.”

Now, mornings in her home are calm and filled with love. “No more smoke, no more fights,” she smiles. “Cooking has become simple, fast, and peaceful.”

# Useful Tips

## Understanding Electricity Use with Electric Cookstoves

A kilowatt-hour (kWh) is a way to measure how much electricity you use



What is a kilowatt-Hour (kWh)?

Price of electricity per unit (kWh): 1400 LAK

Example to calculate electricity cost for cooking:

- If you run a 1,500-watt rice cooker for 1 hour, it consumes 1.5 kWh of electricity, and you will spend **2,100 LAK**
- If you run a 1,000-watt rice cooker for 30 minutes, It consumes 0.5 kWh of electricity, and you will spend **700 LAK**



1.5 kW



1 Hour



1.5 Kwh



2,100 LAK



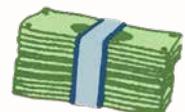
1 kW



30 minutes



1.5 Kwh



700 LAK

# 4

## Cost of Cooking with Different Fuels

Electric cooking offers significant advantages in terms of cost savings. The cost of fuel was calculated based on preparing a typical Lao meal set, sufficient for 4–6 people. This meal includes four types of dishes and was cooked using four different types of fuel for comparison.

### Dishes Prepared

- Sticky Rice
- Chicken Stew
- Bamboo Shoot Soup
- Stir-fried Vegetables



### Fuels/Stoves Used

- **Firewood:** Traditional Ceramic Stoves
- **Charcoal:** Traditional ceramic stoves
- **LPG:** Single burner
- **Electricity:** Induction cooktop, electric grill and electric steamer

Cookstoves used for the Controlled Cooking Test:  
firewood, charcoal, LPG, electric



Firewood



Charcoal



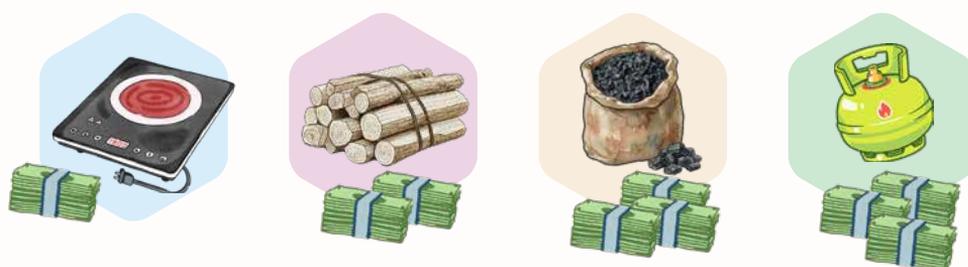
LPG



Electric

The results from the study delivered a clear message that cooking with electricity is more cost-effective than cooking with other fuels.

- Electricity is the most cost-effective option at approximately 1,540 kip per meal.
- Firewood costs nearly double, at about 3,080 kip per meal, roughly 2 times the cost of electricity.
- Charcoal and LPG are the most expensive, costing 4,180 – 4,840 kip per meal, or roughly three times the cost of electricity.



Cost of Fuel per Meal (LAK)



Figure-5: Cost of Cooking Fuel for a Typical Lao Meal Set (Family size: 4 to 6)

Table-1: Price of cooking fuel in Vientiane, Laos

|                            |                                |
|----------------------------|--------------------------------|
| Firewood (per kg) 1,730kip | Charcoal (per kg) 5,330kip     |
| LPG (per kg) 24,000kip     | Electricity (per kWh) 1,140kip |

# 5

## Time of Cooking with Different Fuels

The cooking times show how long it takes to prepare one full Lao meal on a single stove. If more than one stove is used at the same time, the total cooking time would be shorter. For firewood and charcoal stoves, the time to prepare the stove was also included.

The results show that LPG stoves are the fastest, taking about 62 minutes to cook a complete meal. Electric stoves take a little longer, around 70 minutes. Charcoal stoves take the longest because they take time to light and burn slowly.



Figure-6: Cooking time with different fuels

# Fuel Type and Taste of Food

# 6

## Blind Taste Test: Does Cooking Fuel Affect Food Taste?

To explore whether the type of cooking fuel influences the taste of food, we conducted a blind taste test. In this setup, participants were unaware of which fuel was used to prepare each dish, ensuring unbiased feedback on taste, aroma, appearance, and texture.

We prepared five popular Lao dishes using four different fuels—electricity, charcoal, firewood, and LPG—and labeled them simply as A, B, C, and D.



Figure-7: Blind taste test presentation

By keeping the cooking method hidden, participants rated each dish for taste, appearance, aroma, and texture using three categories: **Good**, **OK**, or **Not Good**.

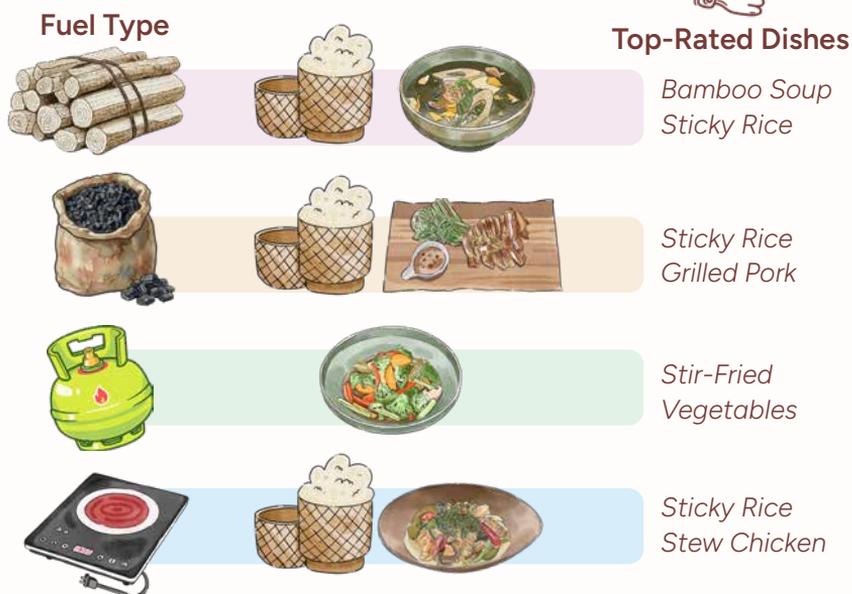


*Figure-8: People participating in the blind taste test*

After collecting all ratings, we analyzed the trends to see if any fuel consistently produced better results. The findings were surprising:

**No clear link** emerged between fuel type and food taste. While some fuels scored slightly higher for certain dishes, overall patterns were mostly random.

## Top rated dishes per fuel type during the blind taste testing



For example:

- **Sticky Rice** received similar ratings when cooked with charcoal, firewood, and electricity, while LPG was rated somewhat differently.
- **Bamboo Soup** stood out as best when cooked with firewood, whereas electricity scored slightly lower than charcoal and LPG.

**Key takeaway:** The results show that food taste does not depend on the fuel used. Personal preference remains the most important factor.

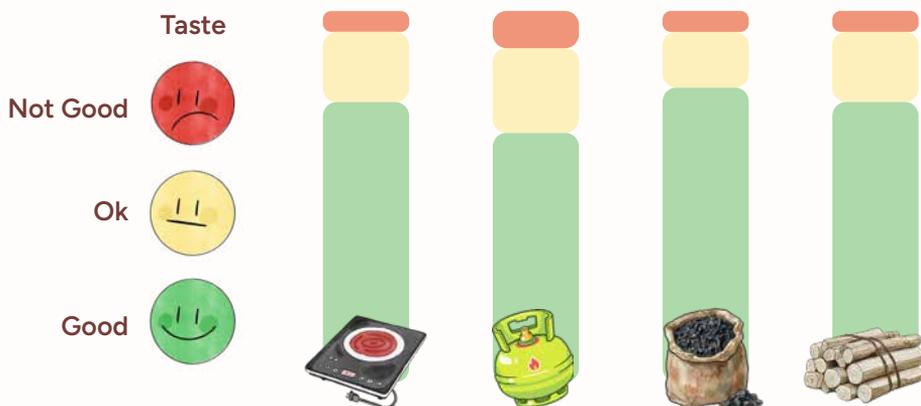


Figure-9: Blind Taste Test Result for sticky rice

# 7

## Introduction to Electric Cookstove Device

This section provides a brief description of the most commonly used electric cooking devices in the Laotian market. Among these, the most common in Lao households are induction, rice cookers, electric pans (red pots), steamers, electric grills and air fryers. Electric Pressure Cookers (EPC) are being introduced, but these are not very popular to date.

### 7.1 Induction Stove



#### 7.1.1 What is an Induction Stove?

An induction stove is faster, safer, and super energy-efficient! This cooktop is a type of electric stove that uses electromagnetic energy to directly heat pots and pans. Unlike traditional gas or other electric cooktops, induction cooktops heat the cookware itself rather than the surface. This results in faster cooking times and more precise temperature control, making it an ideal choice for precise cooking methods like sautéing or simmering<sup>3</sup>.

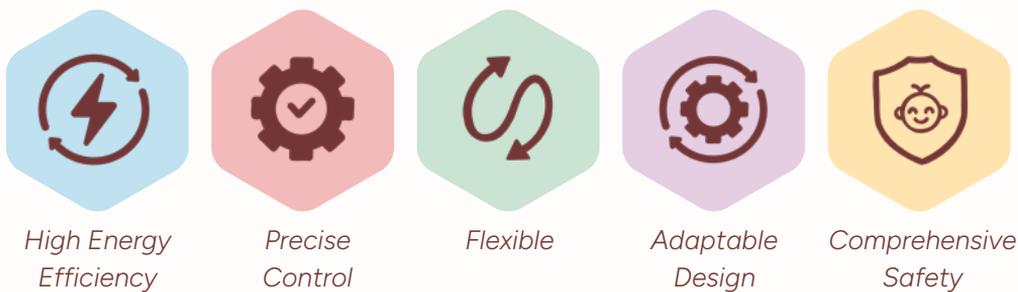


**Regular stoves heat a coil or flame, which then heats the pan (wasting energy).**

**Induction stoves use magnetism to heat only the pan itself—the cooktop stays cool!**

<sup>3</sup> Source: <https://www.whirlpool.com>

## 7.1.2 Benefits of cooking with induction stoves:



## 7.1.3 Basic Features

**Magnetic cookware only:** Works with stainless steel or iron pots—non-magnetic pans Will not heat.

**Instant heat control:** Heats the pan directly for fast, even cooking and precise temperature adjustment.

**Energy efficient:** Transfers energy directly to the cookware, wasting less heat than gas or charcoal.

**Easy to clean:** The smooth, flat surface wipes clean quickly after use.

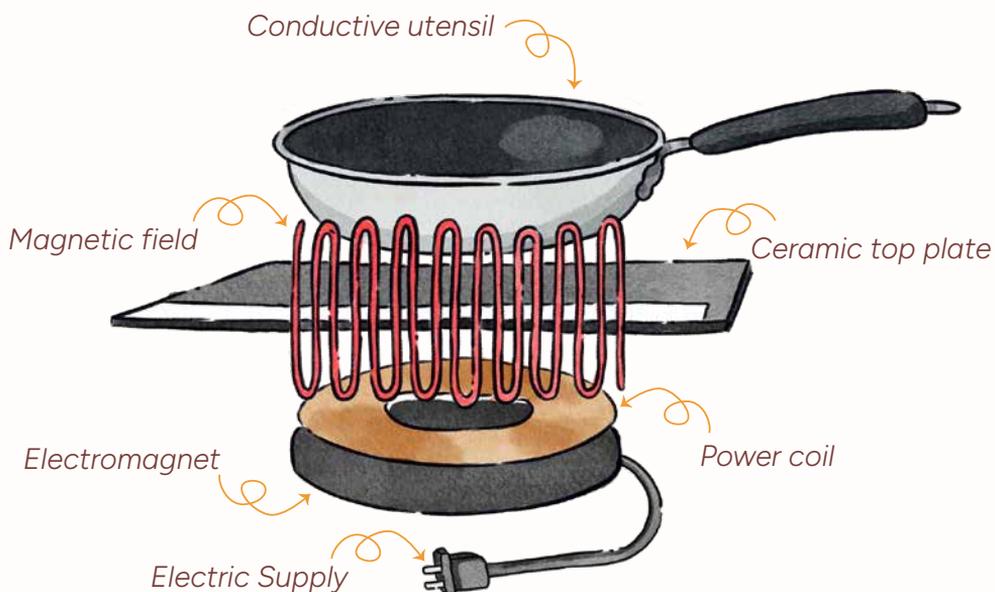


Figure-10: Main Components of Induction Stove

*Table-2: Comparison of induction cookstove versus traditional gas/charcoal and hotplate*

| Feature           |  Cooking Speed |  Energy Waste |  Safety |  Air Pollution |
|-------------------|---|--|--|---|
| Gas/Charcoal      | Slow  | High (heat escapes)  | Fire risk  | Smoke & fumes   |
| Electric Hotplate | Medium  | Medium   | Hot coils  | None  |
| Induction         | Fastest   | Least  | No burn risk!<br>(only pan heats)  | Cleanest  |

## Try this

Place a piece of paper between an induction stove and a pot. Turn it on—the paper will not burn because only the pot gets hot! Note : You should always monitor your cooktop closely to avoid safety hazards



## 7.1.4 Key Tips for Using an Induction Cooker in a Laotian Kitchen

### Cookware Compatibility



**Magnetic Test:** Use a fridge magnet to check if a pot or pan is compatible. It must stick to the bottom.



**Flat Bottoms:** Ensure your cookware has a flat bottom for efficient and even heating.

### Energy & Efficiency



**Use Lids:** Cover pots to trap heat, which helps food cook faster and saves energy.

### Common Mistakes to Avoid

- **Overheating Empty Pans:** Never keep an empty pan on an induction cooktop while it is switched on, as it can damage the pan or the cooktop.
- **Wrong Cookware:** Avoid using non-magnetic materials like aluminum or glass, as they will not heat up.
- **Incorrect Power Settings:** Adjust the heat level according to the food you're cooking; high heat is not always necessary.

### Maintenance & Safety

- **Clean Spills:** Wipe up spills, especially sugary liquids, right away to prevent them from hardening and scratching the surface.
- **Use Soft Cloths Only:** Clean the surface with a soft cloth to avoid scratches.
- **Use a Surge Protector:** Protect your cooker from power fluctuations with a surge protector.

## 7.2 Electric Rice Cookers

### 7.2.1 What is an Electric Rice Cooker?

An electric rice cooker is a simple kitchen appliance that cooks rice automatically using electricity and steam.

You just add rice and water, press the cook button, and it prepares the rice without needing attention. When done, it automatically switches to keep warm mode. Rice cookers are widely used in Laos for their convenience and consistent results.



### 7.2.2 Benefits of the electric rice cooker



*Hygienic*



*Perfect Rice  
Every Time*



*Easy to use  
with one  
button*



*Safe for Kids  
& Elders*



*Clean Cooking/  
Environment  
Friendly  
Alternative*

### 7.2.3 Basic features of a Rice Cooker

- **Automatic cooking & keep-warm:** Cooks rice perfectly, then keeps it warm.
- **Non-stick inner pot:** Prevents rice from sticking and makes cleaning easy.
- **Thermostat control:** Adjusts heat automatically for even cooking.
- **Removable lid or pot:** Simple to clean and refill.



## 7.2.4 Key Tips for Using an Electric Rice Cooker in a Laotian Kitchen

### Best Practices:

- **Pre-soak sticky rice** to make cooking faster.

### Common Mistakes to Avoid

- **Overfilling:** Never fill more than  $\frac{3}{4}$  full to prevent spillover.
- **Improper Cleaning:** Always wipe the inner pot dry to prevent rust.
- **Heating Plate:** Keep the heating plate clean for even cooking.
- **Old Cookers:** If rice burns easily, replace the cooker as the thermostat may be faulty.
- **Unplugging:** Do not unplug the power cable immediately after use.

### Maintenance

- **Descale monthly:** Use a vinegar and water solution to remove mineral buildup.
- **Check the heating plate:** Ensure it is clean for even cooking.
- **Replace old cookers:** If rice burns easily, the thermostat may be faulty.

## Bonus

Steam vegetables, fish, or sai oua while your rice cooks — one pot, many dishes!

Far more efficient than charcoal — perfect for Laos' clean electric energy!

## 7.3 Electric Frying Pan (Red Pot)

### 7.3.1 What is Red Pot?

A red pot (multi-purpose electric pan) is a versatile cooking appliance that works as a hot pot, frying pan, and steamer in one. It is commonly used for making soup, noodles, stir-fries, and hot pot meals, and in Laos it is also used for steaming sticky rice.



### 7.3.2 Benefits of Red Pots for Laos Kitchens



*Energy Efficient & Works Anywhere*



*Affordable*



*Easy to Use & Familiar*



*Safe and Convenient*

### 7.3.3 Basic features of Electric Red Pots



*Adjustable heat control*



*Non-stick inner pot*



*Steam tray*



*Glass lid*



*Safety shut-off*

### 7.3.4 Key Tips for Using a Red Pot in a Laotian Kitchen

#### Cooking & Using:

- **Place Safely:** Use it on a flat, stable surface, away from curtains or flammable materials; Plug in and set the desired temperature.
- **Cook a Variety:** Great for boiling, steaming, stir-frying, deep-frying, and hotpot—just adjust the heat to your recipe.
- **Don't Overfill:** Keep food or liquid below the max line to prevent spills and burns.
- **Handle with Care:** The pot gets hot—use dry cloths or gloves, and keep children at a safe distance.

#### Cleaning & Caring:

- **Cool Before Cleaning:** Wait 10–15 minutes after cooking before wiping. Never immerse the base in water.
- **Wipe Gently:** Use a soft cloth or sponge with mild soap, and dry well before storing.

## Bonus

### Tabletop Sharing Experience

- Red electric hot pots encourage **family-style eating**, which fits beautifully with Lao food culture.
- Everyone can **add ingredients gradually**, share soup, and adjust flavours to taste.
- Great for **social cooking and eating** in village homes, dorms, or urban kitchens.

## 7.4 Steamer

### 7.4.1 What is an Electric Steamer?

An electric steamer is a modern kitchen appliance that uses electric power to cook food with steam. It usually includes a water reservoir, heating element, and stackable steaming trays with holes for steam to pass through.

In Laos and Thailand, electric steamers are now common in both urban and rural homes for their simplicity, energy efficiency, and ability to cook traditional dishes like khao niew (sticky rice), pa mok (steamed fish), and vegetables.

To steam sticky rice, soak it for a few hours, fill the base with water, bring it to a boil, and place the soaked rice in the steaming basket. Steam for about 15-20 minutes until it is soft and translucent.



### 7.4.2 Benefits of Electric Steamer



*Preserves  
Traditional  
Cooking*



*Healthier  
Meals*



*Time-Saver*



*Multi-Tasker*



*Eco-Friendly*

### 7.4.3. Basic Features

It consists of stackable layers allow cooking rice, vegetables, or fish at the same time. Most models include auto shut-off, water-level indicators, and timers for convenience. This is made from stainless steel or heat-resistant plastic, easy to clean and maintain. It is designed for uniform steam distribution to ensure perfectly cooked sticky rice every time.



## 7.4.4 Key Tips for Lao Cooking

### Before Steaming

- **Line the basket:** Use a damp cloth (muslin or cheesecloth) so rice does not stick or fall through holes.
- **Add just enough water:** Water should not touch the basket — leave space for steam to rise.
- **Use soaked rice:** Soak sticky rice 3–4 hours (or overnight) for even steaming.

### While Steaming

- **Keep a gentle boil:** Strong boiling makes uneven cooking. Maintain steady steam.
- **Flip halfway:** After 10–15 minutes, turn or mix the rice to cook both top and bottom evenly.
- **Steam until translucent:** When grains turn clear and soft, it is ready. Avoid overcooking.

### After Steaming

- **Let it rest:** Leave covered for 2–3 minutes to finish cooking in its own steam.
- **Fluff while warm:** Use a wooden paddle to gently separate the grains.
- **Avoid compacting hot rice:** Let it cool slightly before shaping or serving.

### Reheating Leftovers

- Sprinkle with a little water and re-steam for 5 minutes to restore softness.
- Do not soak again — it will become soggy.

### Care & Maintenance

- Rinse the steamer immediately after use to remove sticky rice and prevent residue buildup.
- Clean all parts with warm water and a soft brush; avoid using metal scrubbers.
- Air-dry completely before storage to prevent mold or rust.
- Descale the water tray once a month with vinegar or citric acid if using hard water.

## 7.5 Electric Air Fryer

### 7.5.1 What is an Electric Air Fryer?

An air fryer is a small kitchen appliance that cooks food using hot air instead of oil. It works like a mini convection oven, making food crispy and golden — similar to deep frying but much healthier. Just place food in the basket, optionally spray with a little oil, set the time and temperature, and let it cook!



### 7.5.2 Benefits of Cooking with Air Fryer



*Healthier  
and Safer  
Cooking*



*Fast & Energy  
Efficient*



*Versatile*



*Easy to  
Clean*



*Eco-Friendly*

### 7.5.3 Basic features of an Air fryer

- **Hot Air Circulation:** Cooks food evenly and crisps the outside.
- **Adjustable Temperature & Timer:** Easy to control cooking settings.
- **Non-Stick Basket:** Simple to clean and often dishwasher-safe.
- **Compact Design:** Fits well in small kitchens.
- **Versatile Cooking:** Great for fries, chicken, veggies, and more.

## 7.5.4 Key Tips for Using Air Fryers in a Laotian Kitchen

### Flavor Hacks

- “Charred” effect – Spritz with oil and air fry 2 extra mins for smoky jeow bong (chili dip).
- Banana chips – Toss thinly sliced bananas with coconut oil, air fry 10 mins at 160°C.
- Crispy pork belly – Score skin, rub with salt, air fry 25 mins for sin dat-style crunch.

### Tip

Shake the air fryer basket halfway for even cooking!

### Avoid Common Mistakes

- Overcrowding – Leaves food soggy (cook sausages and meat in single layers).
- Skipping oil – A light spray of oil ensure proper crisp.
- Ignoring shakes – Shake crispy rice halfway for even browning.

### Maintenance for Humidity

- Clean after each use – Wipe with vinegar to prevent sticky rice residue buildup.
- Dry thoroughly – Laos’ humidity can rust the basket (store with silica packs).
- Replace worn baskets – Frayed non-stick coating affects cooking.

## Bonus

### Extra Useful for Lao Cooking!

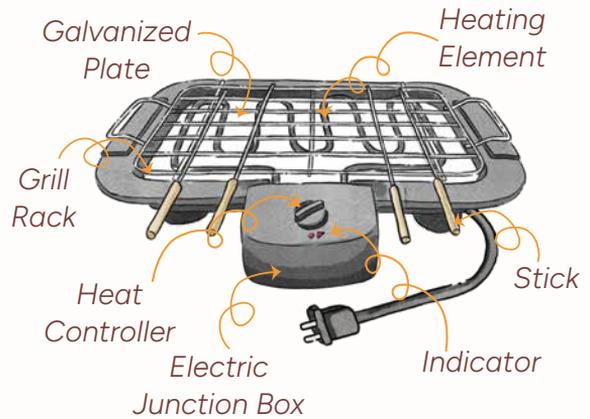
“Crispy khao jee, quick mok pa, and tasty veggies — Air fryers make Lao meals fast, healthy, and delicious!”

## 7.6 Electric Grill

### 7.6.1 What is an Electric grill?

An electric grill is a modern appliance that cooks food using electricity instead of charcoal or gas. It is safe, clean, and easy to use — perfect for indoor or outdoor cooking without smoke or fire.

To use, plug it in, preheat for a few minutes, then place your food on the grill. Adjust the temperature for your dish, whether grilling meat, fish, or vegetables. After cooking, let it cool and wipe clean—no mess, no hassle.



“Perfect for safe, clean, and easy grilling anytime!”

### 7.6.2 Benefits of Electric Grill for Laos



Clean & Healthy  
Cooking



Easy and Safe  
to Use



Low-Cost



Eco-Friendly

### 7.6.3 Basic features of an Electric Grill

- **Adjustable Heat Control:** Allows precise temperature settings for different types of food.
- **Even Heat Distribution:** Ensures consistent cooking across the entire grill surface.
- **Safe for Indoor Use:** Operates without open flames or charcoal.
- **Easy to Clean:** Non-stick grill plates and a removable drip tray simplify cleanup.
- **Compact and Portable:** Convenient for use at home or outdoors.

## 7.6.4 Key Tips for Using an Electric Grill in a Laotian Kitchen

### Energy & Efficiency Tips

- **No preheating needed** for most Lao dishes (saves power).
- **Batch grilling** – Cook extra ping sin (grilled meats) for leftovers.
- **Use residual heat** – Keep food warm on the grill's «low» setting.



*No preheating  
needed*



*Batch grilling*



*Use residual  
heat*

### Common Mistakes to Avoid

- **Overcrowding** – Prevents proper searing (grill in batches if needed).
- **High heat for delicate foods** – Chicken skewers needs medium-high, but grilled fish needs medium.
- **Skipping oil** – Lightly oil the grill plate to prevent sticking (especially for sticky rice cakes).

### Maintenance for Longevity

- **Clean immediately** – Scrub grill plates while warm to remove sticky marinades.
- **Avoid metal utensils** – Use wooden or silicone tools to prevent scratches.
- **Store properly** – Keep in a dry place to avoid humidity damage.

Same great flavour as charcoal, zero smoke- electric grills  
make Lao meals tasty, fast, and clean!

## 7.7 Electric Pressure Cookers (EPC)

### 7.7.1 What is an electric pressure cooker?

An Electric Pressure Cooker (EPC) is a modern cooking pot that uses electricity and steam pressure to cook food faster and with less effort than traditional stoves. It traps steam inside a sealed pot, cooking meals quickly while keeping nutrients and flavor.



EPCs are energy-efficient, cutting cooking time and power use by up to 70%. Most models range from 700W to 1,200W, depending on their size. Easy to use, safe, and clean, they are ideal for both urban and rural homes with electricity.

### 7.7.2 Benefits of EPC for Laos



*Saves Time*



*Clean Cooking*



*Energy & Cost  
Efficient*



*Simple &  
Convenient*



*Keeps Food  
Warm*

### 7.7.3 Basic features

- **Fast & Energy-Saving** – Cooks food up to 70% faster than on a stove, using less electricity.
- **Easy to Use** – One-touch buttons for rice, soup, meat, and more.
- **Safe Design** – Automatic pressure control, locking lid, and heat protection.
- **Easy to Clean** – Non-stick inner pot and removable parts.
- **Works Anywhere** – Great for both urban and rural homes with electricity.



## 7.7.4 Key Tips for Using Electric Pressure Cookers (EPCs)

### Stay Safe

- Don't fill too much: solids  $\leq \frac{2}{3}$ , liquids  $\leq \frac{1}{2}$ .
- Check the rubber ring: clean and in place.
- Release pressure carefully: natural for soups, quick for vegetables.
- Keep steam vents clear.

### Cook Smart

- Make bigger batches and save extras.
- Cook two things at once: main below, sticky rice on top.
- Use "Keep Warm" to finish cooking without extra power.

### Avoid Mistakes

- Add thickeners (cornstarch/flour) after cooking.
- Don't overcook vegetables or fish (5–8 min).
- If "burn" shows, switch off, cool, and clean stuck food.

### Take Care

- Clean vents and removable parts after use.
- Replace gasket if cracked or smelly.
- Clean inside once a month with vinegar and water.

### EPCs: Twice as Fast, Half the Energy<sup>4</sup>

- EPCs can reduce cooking time by 50–70% and energy use by 60–70% compared to biomass and charcoal stoves.
- EPCs operate at 70–80% thermal efficiency, while charcoal stoves average only 15–25%.



## Safety Tips



## Electric Kitchen Appliance Safety Tips



*Teach children about electric appliance safety*



*Don't leave appliances unattended while in use*



*Ensure proper ventilation to prevent overheating and accumulation of steam*



*Make sure everyone in the household knows how to use the appliances safely.*



*Keep away from water especially in traditional kitchens*



*Buy appliances that are approved and certified for safety.*



*Ensure proper house wiring and connect to main power socket (No extension cord)*



*Carry out repair and maintenance on time and clean each device after use*



*Minimize the use of extension cords; if necessary, use heavy-duty ones rated for cooking appliances.*



**CLASSIC LAO  
RECIPES FOR  
ELECTRIC  
COOKING**





## Steamed Sticky Rice

| Ingredient                       | grams |
|----------------------------------|-------|
| Raw Sticky rice (glutinous rice) | 800   |
| Water (for soaking)              | 1400  |

| Equipment                               |
|---|
| A bamboo steamer (or a steaming basket) |
| A pot or steamer                        |





## Preparation

- Rinse the sticky rice in cold water 2-3 times until the water is clear.
- Soak the rice in room-temperature water for at least 3-4 hours, but ideally overnight for the best texture.
- After soaking, drain the rice completely.

## How to Cook

- Fill a pot with a few inches of water and bring it to a boil.
- Place the drained rice in a bamboo steamer or a muslin cloth inside a steaming basket.
- Steam over medium-high heat for about 25–30 minutes, flipping the rice halfway through to ensure even cooking.
- Check for doneness as the grains should be tender and sticky but not mushy.
- Once done, transfer the sticky rice to a serving basket and cover with a cloth to keep warm.





## Lao Style Chicken Stew (Oh Lam Kai)

| Ingredient         | grams |
|--------------------|-------|
| Vegetable oil      | 10    |
| Chicken            | 400   |
| Red onion (sliced) | 20    |
| Green eggplant     | 80    |
| Long bean          | 80    |
| Lemongrass         | 30    |
| 3 Chilies (sliced) | 10    |
| Galangal           | 10    |
| Fish sauce         | 12    |
| Water              | 450   |
| Padaek             | 15    |
| Salt               | 2     |

| Ingredient  | grams |
|---|-------|
| Sticky rice   | 50    |
| Dill  | 30    |
| Sweet basil leaves (E Tu)   | 15    |
| Dried wood ear mushrooms.<br>15g (Soaked in water until<br>soft, drained) | 15    |
| 4 kaffir lime leaves  |       |





## Preparation

- Soak sticky rice and dry wood ear mushroom separately in water for 10–20 minutes.
- Pound the soaked rice into a fine paste using a mortar and pestle.
- Pound the lemongrass, red shallots, chilies with salt together and put in a bowl.

## How to Cook

- Heat vegetable oil in a large pot over medium heat before fry the mixed shallots, sliced chilies, minced galangal and lemongrass until fragrant.
- Add the chicken pieces to the pot. Cook until lightly browned, then pour in water to boil.
- Stir in fish sauce and padaek.
- Bring to a boil and let it simmer for 3-5 minutes.
- Add the sticky rice paste to thicken the stew.
- Simmer for another 3-5 minutes until flavors meld together.
- Add the chopped dill and kaffir lime leaves.
- Stir well and cook for 3-5 more minutes.
- Before serving, stir in sweet basil leaves (E Tu) and garnish with additional herbs if desired.
- Serve hot with steamed sticky rice.



**Electric**  
352 kip



**Energy**  
0.302 kWh



**Time**  
19 mn



**Serves**  
4 - 6



## Stir-fried mixed vegetables

| Ingredient                  | grams |
|-----------------------------|-------|
| Vegetable oil               | 15    |
| Garlic (minced)             | 20    |
| Red onion (sliced)          | 15    |
| Carrot (sliced)             | 100   |
| Broccoli (cut into florets) | 150   |
| Baby corn (sliced)          | 80    |
| Green beans (sliced)        | 150   |

| Ingredient              | grams |
|-------------------------|-------|
| Mushrooms (sliced)      | 150   |
| Fish sauce              | 9     |
| Soy Sauce               | 9     |
| Water                   | 30    |
| Pinch of pepper         | 1     |
| Sugar                   | 2     |
| Oyster sauce (optional) | 14    |





## Preparation

- Wash and cut all vegetables into bite-sized pieces. Keep harder vegetables (like carrots and broccoli) separate from softer ones (like mushrooms and bell peppers), as they have different cooking times.

## How to Cook

- Heat a wok or large pan over medium-high heat. Add oil and swirl to coat the pan.
- Add minced garlic and stir-fry for a few seconds until fragrant (don't let it burn).
- Add carrots and broccoli, stir-fry for about 1-2 minutes. Add baby corn and green bean, stir-fry for another 1-2 minutes.
- Add mushrooms, then pour in soy sauce, fish sauce, oyster sauce, sugar, and water/vegetable broth. Stir well and cook for 1-2 more minutes until vegetables are tender but still crisp.
- Taste and adjust seasoning with soy sauce and white pepper if needed.

**TIPS** Cook on high heat for a crisp texture. Don't overcook; vegetables should stay vibrant and slightly crunchy.



**Electric**  
198 kip



**Energy**  
0.181 kWh



**Time**  
12 mn



**Serves**  
4 - 6



## Bamboo Shoots Soup

| Ingredient   | grams |
|--|-------|
| Yanang leaves  | 40    |
| Water  | 1300  |
| Padaek   | 30    |
| Fish sauce   | 10    |
| Mushrooms  | 100   |
| Pork belly (optional)  | 150   |
| Lemongrass (Chopped 2 cm pieces)   | 35    |
| Bamboo shoot (Cooked in boiling water for 10 minutes, drained)   | 250   |
| Dried wood ear mushrooms (Soaked in water until soft, drained)   | 30    |
| Raw sticky rice (Soaked in cold water until soft, drained and ground with enough water to make a fine paste) | 80    |

| Ingredient                         | grams |
|------------------------------------|-------|
| Pumpkin – diced                    | 100   |
| Gourd (Mak Bouap)                  | 100   |
| 5 chillies                         | 15    |
| Garlic                             | 20    |
| Red onion                          | 25    |
| Sugar                              | 2     |
| Pinch of salt                      |       |
| Khayaeng leaves or Phak Kha leaves | 30    |





## Preparation

- Place the Yanang and water in a large bowl and scrub leaves together to extract juice.
- Squeeze liquid out of leaves and place all in the pot and boil.
- Pound the red onion with the lemongrass, garlic and salt.

## How to Cook

- Add the cooked bamboo shoot, padaek and fish sauce and bring to just below the boil, without stirring.
- Add the pork belly, if using, and simmer for 3-5 minutes.
- Add the pounded lemongrass, pumpkin and soaked wood ear mushrooms and cook for another 5 minutes, or until pumpkin is just tender.
- Add the gourd, mushrooms and chilies, sticky rice paste and cook for 2 minutes.
- Add sugar, Khayaeng.
- Simmer and ready to serve.



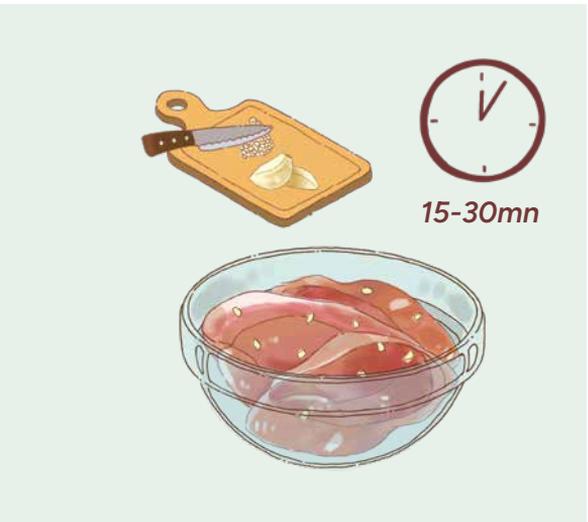


## Grilled Pork

| Ingredient      | grams |
|-----------------|-------|
| Pork            | 600   |
| Garlic (minced) | 35    |
| Soy Sauce       | 15    |

| Ingredient | grams |
|------------|-------|
| Fish sauce | 5     |
| Sugar      | 2     |





## Preparation

- Cut the pork to many big pieces, not too thick for well cooked.

## Marination

- Put the soy sauce, fish sauce, garlic, sugar in the bowl with the pork.
- Mix well until sugar has dissolved completely.
- Leave for at least 15 - 30 minutes.

## How to Cook

- Grill the pork for 15-20 minutes with often check and turn the both side for well cooked.
- Let the pork rest for a few minutes before slicing.
- Served with sticky rice and a side of spicy dipping sauce.

 Electric  
814 kip

 Energy  
0.712 kWh

 Time  
28 mn

 Serves  
4 - 6



## **SPECIAL RECIPES**





# ANNEXES 1

## Special recipes

*Kids' Corner: Fun & Easy Lao E-Snacks!*..... 46

Little chefs can help make these quick, safe, and delicious snacks using electric appliances!

*Lao Festival Specials: Electric-Made Edition!*..... 48

Celebrate traditions with modern, smoke-free cooking using electric appliances.

*Zero-Waste Lao E-Cooking Recipes*..... 50

Turn leftovers into delicious meals with your electric appliances — no food wasted!

# Kids' Corner: Fun & Easy Lao E-Snacks!



## Khao Jee Pan (Lao Sticky Rice Balls)

**Appliance:** Rice cooker (for rice) + induction stove

**Time:** 20 mins

**Ingredients:**

- 1 cup cooked sticky rice
- 1 egg
- 1 tsp sugar
- A little oil

**Steps:**

- Mix rice, egg, and sugar in a bowl.
- Shape into small balls (let kids help!).
- Heat oil in a pan on medium heat (150°C).
- Fry until golden (2 mins per side).

**Fun Twist:** Add banana slices inside the rice balls!

## Khao Tom Mad (Sweet Coconut Rice)

**Appliance:** Rice cooker

**Time:** 15 mins

**Ingredients:**

- 1 cup rice
- 1 tbsp sugar
- 1 cup coconut milk
- A pinch of salt

**Steps:**

- Put everything in the rice cooker.
- Press "Cook" and wait for the ding!
- Stir and let cool. Eat warm or cold!

**Topping Ideas:** Mango slices, roasted sesame seeds.



## Mini Khao Khaab (Lao-Style Sandwiches)

**Appliance:** Electric grill pan

**Time:** 10 mins

**Ingredients:**

- Bread slices
- Laughing Cow cheese or pâté
- Cucumber, cilantro

**Steps:**

- Spread cheese on bread.
- Add veggies.
- Grill on medium heat for 2 mins per side (until crispy).

**Bonus:** Cut into fun shapes with cookie cutters!



### Khanom Krok (Mini Coconut Pancakes)

**Appliance:** Electric pan (or muffin maker)

**Time:** 15 mins

**Ingredients:**

- 1 cup rice flour
- 1/2 cup coconut milk
- 1 tbsp sugar
- A pinch of salt

**Steps:**

- Mix all ingredients into a batter.
- Pour into greased pan holes.
- Cook for 5 mins until edges turn golden.

**Fun fact:** These look like tiny cups — kids love them!

### Ping Man (Sweet Roasted Potato)

**Appliance:** Air fryer or electric oven

**Time:** 20 mins

**Ingredients:**

- 1 sweet potato (cut into fries)
- 1 tsp honey

**Steps:**

- Toss sweet potato with honey.
- Air fry at 180°C for 15 mn (shake halfway!).

**Dip idea:** Coconut yoghurt!



### Notes for Parents & Teachers

- **Safety first:** Supervise kids near appliances.
- **Learning moment:** Teach energy savings  
(e.g., "This rice cooker uses less power than charcoal!").
- **Make it fun:** Let kids decorate their snacks with edible flowers or fruit.

# Lao Festival Specials: Electric-Made Edition!



## Sai Oua (Lao Herb Sausage)

**Appliance:** Electric grill pan or air fryer

**Time:** 15 mins

### Ingredients:

- 500g pork mince
- Chili paste
- Lemongrass, galangal, kaffir lime leaves (finely chopped)

### Steps:

- Mix ingredients, and shape into patties or links.
- Grill on medium-high (180°C) for 6 mins per side.

**Serve with jeow bong (chilli dip) and sticky rice!**

## Ping Gai (Festival Grilled Chicken)

**Appliance:** Air Fryer

**Time:** 18 mins

### Ingredients:

- Chicken
- Garlic
- Coriander roots
- Fish sauce
- Honey

### Steps:

- Marinate chicken thighs with all ingredients (1 hour).
- Air fry at 180°C for 15 mins, flip halfway.

**Near-foolproof: No flare-ups like charcoal!**



## Boun Khao Pad (Festival Fried Rice)

**Appliance:** Induction stove + wok

**Time:** 10 mins

### Ingredients:

- Cold sticky rice, egg, lap cheong (Chinese sausage)
- Fish sauce, green onions

### Steps:

- Stir-fry sausage on high heat (200°C).
- Add rice, and break up clumps.
- Push rice aside, and scramble eggs in the centre. Mix all!



### Khao Lam (Lao Bamboo Sticky Rice)

**Appliance:** Rice cooker + oven/air fryer

**Time:** 45 mins (vs. 2 hours charcoal-roasted)

**Ingredients:**

- 2 cups glutinous rice
- ½ cup black beans (optional)
- 1 cup coconut milk
- Banana leaves (foil)

**Steps:**

- Soak rice for 30 mins, and mix with coconut milk.
- Pack into banana leaf tubes (or foil rolls).
- Rice cooker method : Add 1 cup water, and place the rolls on a steamer rack, cook 20 mins → Unwrap and air fry/oven-bake (5 mins) for a charred effect!

**No bamboo? Use muffin tins for “Khao Lam Cups”!!**

### Energy-Saving Festival Tips

- **Battery backup:** Use power banks for portable induction stoves at outdoor events.
- **Solar synergy:** Pair EPCs with solar panels in rural areas.
- **Bulk cooking:** Use 10L electric pots for community feasts.

### Why Electric for Festivals?

- **Consistent heat:** No charcoal flare-ups ruining sai oua.
- **Indoor-friendly:** Cook during rainy Boun Lai Heua Fai (boat festival)!
- **Eco-celebration:** Reduce deforestation from festival charcoal use.

**Pro Tip:** Host an “E-Cooking Demo Booth” at festivals to spread adoption!

# Zero-Waste Lao E-Cooking Recipes



## Jeow Mak Len (Zero-Waste Tomato Dip)

**Use:** Overripe tomatoes, chilli stems, and garlic skins

**Appliance:** Induction + Electric Blender

**Time:** 5 mins

### Ingredients:

- 2 soft tomatoes
- 1 chili (seeds and all)
- 1 garlic clove (peel optional for fibre)

### Steps:

- Char all ingredients on a dry induction pan (high heat).
- Blend into a dip—serve with veggie stems as crudités!

## “Everything” Fried Rice

**Use:** Leftover rice, limp veggies, herb stems

**Appliance:** Induction + Wok

**Time:** 8 mins

### Ingredients:

- 1 bowl of cold rice
- 1 egg
- Carrot peels, cabbage cores, cilantro stems

### Steps:

- Stir-fry veggies at 200°C until soft.
- Add rice + egg, and toss with fish sauce.

**Pro Tip:** Save shrimp shells in the freezer for umami powder!



## Bone Broth

**Appliance:** Electric Pressure Cooker

**Time:** 1 hour (vs. 6 hours simmering)

### Ingredients:

- Chicken/beef bones
- Onion skins
- Lemongrass ends
- 2L of water

### Steps:

- Add bones, onion, lemongrass and water to EPC
- High pressure for 45 mins → Strain then ready use for khao piak sen soup!



### **Banana Peel Curry**

**Use:** Ripe banana peels (yes, edible!)

**Appliance:** Induction Stove

**Time:** 15 mins

**Ingredients:**

- 2 banana peels (sliced)
- Coconut milk, curry paste

**Steps:**

- Sauté peels + paste 3 mins.
- Add coconut milk, simmer 10 mins.

**Tastes like bamboo shoots!**

### **Zero-Waste Pro Tips**

- **Herb stems:** Blend into jeow or freeze for broth.
- **Rice water:** Use to water plants or ferment into skincare toner.
- **Veggie scraps:** Regrow spring onions in a jar!

### **Electric appliances make it easy:**

- **Induction:** Quick charring for dips.
- **EPC:** Turns scraps into broth fast.
- **Blender:** Pulp leftover coconut for body scrub!

**This section makes e-cooking easy, educational, and exciting for the next generation!**

# ANNEXES 2

## Beyond the Classics recipes

### **Induction Stove**

*Stir-Fries (Pad Lao) – pad pak (veggies)  
or pad see ew (noodles).*

*Soups (Kaeng No Mai)*

*Sticky Rice (Khao Niew)*

### **Rice cooker**

*Plain Sticky Rice (Khao Niew)*

*Khao Tom (Rice Porridge / Congee)*

*Khao Piak Sen (Lao Rice Noodle Soup)*

*Boiled Vegetables (e.g., Pak Bung - Morning Glory)*

*Steamed Eggs or Egg Custard*

*Lao-style Curry with Pumpkin or Green Papaya*

*Steamed Root Vegetables or Pumpkin*

*Steamed Fish with Herbs*

### **Electric air fryer**

*Khao Jee (Lao Baguette)*

*Po Pia Tod (Spring Rolls)*

*Ping Gai (Lao Grilled Chicken)*

*Khao Nom Kok (Coconut Balls)*

*Fried Bananas*

### **Electric Grill**

*Ping Gai (Lao Grilled Chicken)*

*Sai Oua (Herb Sausage)*

*Ping Pa (Grilled Fish)*

*Banana leaf wrap*

*Charred veggies*

*Basting trick*

# ANNEXES 3

## Beyond the Classics recipes

### **Electric Frying Pot (Red Pot)**

*Sin Dat (Lao Hot Pot / Lao BBQ)*

*Feu (Lao Pho)*

*Kaeng Nor Mai (Bamboo Shoot Soup)*

*Or Lam (Spicy Lao Stew)*

*Tom Kha Kai (Lao Coconut Chicken Soup)*

*Khao Piak Sen (Lao Rice Noodle Soup)*

*Boiled Eggs & Lao Egg Curry (Kai Luak or Kai Paen)*

*Boiled Morning Glory (Pak Bung) & Other Greens*

### **Electric Pressure Cooker (EPC)**

*Khao Niew (Sticky Rice)*

*Or Lam (Lao Stew)*

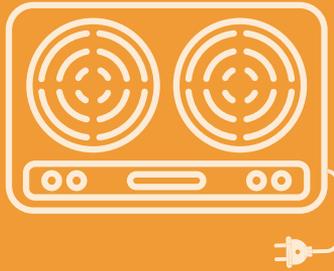
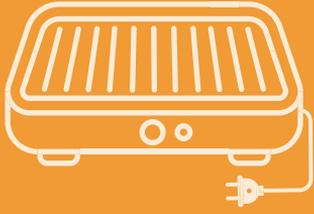
*Sai Oua (Lao Sausage)*

*Khao Piak (Rice Porridge)*

*Khao Poon (noodle soup broth)*

*Beans/Tofu*





**“Your guide to modern cooking—clean, safe, and affordable.”**

Lao PDR, the “battery of Southeast Asia,” has the power to transform cooking. Despite abundant hydropower and affordable electricity, most households still cook with wood and charcoal — harming health and forests. This eCookbook demonstrates that electric cooking is practical, affordable, and delicious. Explore Lao traditional recipes adapted for modern appliances and learn how cleaner cooking can improve health and sustainability.



**Your guide to electric cooking starts here. Scan for details**

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