28 HOSPITALS & HEALTHCARE · HOT WATER

Hot water in every patient room. *Paid for out of the laundry savings.*

Most Philippine hospitals have cold-water patient washing because the diesel laundry boiler and LPG kitchen dishwasher already eat the hot-water budget. One Karnot iHEAT R290 platform replaces both — and uses the saving to add hot water to every patient room for the first time. ~₱500K off the existing bill. Two heat pumps installed: one always backing up the other.

KARNOT

COLD-WATER PATIENT ROOMS · DIESEL LAUNDRY · LPG KITCHEN · TODAY

Most PH hospitals have no hot water in patient rooms. *Because the laundry boiler ate the budget.*

A typical Philippine mid-tier hospital of 150 beds runs **two hot-water duties today**: a diesel or LPG boiler for laundry (60 °C) and LPG / electric resistance for the kitchen dishwasher + canteen (60–75 °C). Both at COP 1.0. Patient rooms get cold-water washing because adding another diesel boiler for showers was uneconomic. **Combined laundry + kitchen spend at a 150-bed mid-tier site: ~₱800,000 a year.**

Your boiler buys heat. The air gives it away.

A diesel boiler buys one peso of heat for one peso of diesel. A Karnot iHEAT R290 **moves four pesos of heat for one peso of electricity** — three of those four pesos are free, from the air around your plant room. Same laundry sheet. Same warm shower for the patient. **75% off the fuel bill.**

Hot water in every room *is finally affordable.*

A heat pump delivers patient-room hot water at **roughly a quarter of the operating cost of a diesel boiler** and a tenth of an electric instant heater. The savings on laundry + kitchen pay for the addition. Same loan. Same monthly cash. A new capability your hospital can put on every brochure.

KARNOT

ONE PLATFORM · THREE LOADS · THE AIR IS THE FUEL

One iHEAT R290 platform. Laundry + kitchen. *Plus patient rooms for the first time.*

KARNOT HOSPITAL HOT WATER · LAUNDRY + KITCHEN (EXISTING) + PATIENT ROOMS (NEW)

SOURCE SIDE

Outside air · the fuel · 100% free

~28–34 °C ambient outdoor air, even at night. The iHEAT evaporator pulls heat **from the air around the plant room** — the fuel you already have, in unlimited supply, that nobody can bill you for. **Electricity only runs the compressor.**

2 × IHEAT R290

*Two heat-pump modules installed. **One always running, one always backing up the other.** COP ~4 at 60 °C across all three duties.*

DELIVERY SIDE

Laundry · kitchen · patient rooms

Laundry @ 60 °C and kitchen dishwasher + canteen @ 60–75 °C (your existing duties). **NEW: patient-room hot water @ 60 °C** with HTM 04-01 Legionella pasteurisation cycle to 70 °C. One platform. One bill.

LAUNDRY · 60 °C

Sheets, gowns, towels · **retires the diesel / LPG laundry boiler entirely** · biggest single hot-water consumer

KITCHEN · 60–75 °C

Commercial dishwasher rinse + canteen taps · **retires LPG burners and electric kettles** · meets DOH food-safety sanitation

PATIENT ROOMS · NEW

Warm showers in every room · **auto Legionella pasteurisation** · HTM 04-01 logging on iSAVE · no missed audit

KARNOT

THE FOUR BOXES · WHAT WE INSTALL

Four products. *One hot-water platform.*

2 × iHEAT R290

The core · 25–50 kW each · always a spare

Two R290 modules installed — **one always running, one always backing up the other**. Together they cover laundry, kitchen and patient-room hot water from one platform. COP ~4 at 60 °C.

iSTOR M500 PCM

Hot-water buffer · 100–250 kWh latent

Phase-change material at 60 °C holds **4+ hours of laundry + patient-room hot water**. Bridges the morning peak and night-shift lulls without restart. Non-lithium — tropical-safe.

iVOLT Solar · load-matched

Zero-export · 30–100 kWp

Sized to match the iHEAT's daytime electrical demand — **no export to the grid**. Midday solar charges the iSTOR tank so morning hot water comes from yesterday's sun.

iSAVE

iSAVE monitoring

M&V · Legionella · CFO report

Logs every pasteurisation cycle to **HTM 04-01 + ASHRAE Guideline 12**. Monthly M&V report to your CFO and your green-loan lender. BACnet / ModBus into the hospital BMS.

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MODELLED · TYPICAL 150-BED PH MID-TIER HOSPITAL · ASK FOR YOUR WORKED CASE

Laundry + kitchen pays for the patient hot water. *And ₱490K stays in the bank.*

MODELLED HOSPITAL · 150 BEDS · MID-TIER	TODAY (DIESEL / LPG / RESISTANCE)	WITH KARNOT IHEAT	CHANGE VS TODAY
Laundry hot water (60 °C)	₱500,000 / yr	₱115,000 / yr	**– ₱385,000**
Kitchen dishwasher + canteen (60–75 °C)	₱300,000 / yr	₱75,000 / yr	**– ₱225,000**
Patient-room hot water · *NEW capability*	₱0 (cold water today)	₱120,000 / yr	**+ patient experience**
Scope 1 emissions	~100 tCO_2 / yr	Zero	**– 100 tCO_2 / yr**
Total annual hot-water spend	**~₱800,000 / yr**	**~₱310,000 / yr**	**~₱490,000 / yr**

Modelled scenario · typical 150-bed PH mid-tier hospital · laundry + kitchen today, cold-water patient washing · typical PH utility commercial tariff April 2026 (~₱14/kWh). Architecture: 2 × iHEAT R290 (one running, one backing up) + iSTOR M500 PCM + iVOLT load-matched solar + iSAVE. ***Modelled CAPEX ~₱2.5M · gross payback ~5 yr before BOI ITH (~3 yr after).*** *Premium hospitals with existing patient DHW: ₱1.5–2.5M/yr spend — numbers scale with bed count. Ask for your worked case.*

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THE CASH FLOW · HOW THE DEAL PENCILS OUT

Roughly flat monthly cash. *But every room gets hot water.*

MONTH 1

~ flat

~₱41K saving roughly covers the ~₱49K loan payment. **The trade is hot water in every patient room from day one** — plus zero Scope 1, plus a backup heat pump always running.

YEAR 1

₱490K

Cash bill avoided in year 1 vs the diesel + LPG + resistance baseline. Plus patient hot water that **didn't exist before**.

YEAR 5

₱2.45M

Loan paid off. From now on you keep **every peso** of the ~₱490K/yr saving — and the patient hot water stays on.

YEAR 10

₱4.9M

Cumulative bill avoided over the 10-year asset life vs running diesel / LPG / resistance.

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HOW YOU PAY FOR IT · YOU DON'T

Three Philippine banks *already lend for exactly this.*

DBP

Sustainable Energy Finance Programme (SEFP)

Healthcare-eligible · 70–80% LTV · 5–10 year terms · designed for energy-efficiency CAPEX.

~6.5–8% p.a.

LandBank

Sustainable Energy Investment Loan (SEILP)

Path of least resistance for hospitals already banking with LandBank. Standard SME terms with green-discount.

~7% p.a.

BPI

Sustainable Development Finance (SDF)

Fastest decisions for established healthcare groups with a BPI relationship. Sized for renewable + efficiency CAPEX.

~1–1.5% below standard SME

These are **loans**, not grants. We don't pretend otherwise — if you call the bank expecting a grant the conversation ends fast. They are real green-discounted commercial loans, with payment schedules sized to fit on top of the monthly savings. **Karnot files the application as part of project scope.** You sign at the bank window, not before. **BOI Pioneer + Income Tax Holiday under RA 11285** stacks on top.

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THE REGULATORY REBELLION · APRIL 2026

You've been told 100 kWp is the cap. *It isn't. And it hasn't been since April.*

THE MYTH

~~100 kWp~~

What every solar quote you've received told you was the maximum. The net-metering cap, pre-April 2026. Covered **4–8%** of an industrial electricity bill.

APRIL 2026 ONWARDS

1 MW

DOE Circular lifted the net-metering cap to 1 MW (or contracted capacity) for commercial & industrial consumers. 10× more solar, same paperwork.

SGF · ZERO EXPORT

No cap

The Self-Generating Facility route has never had a cap. Utility FAQs confirm: "no limitation on the generating capacity that the customer can install to avail of Zero Export." ERC SGF approvals up **170% q/q**.

> **The 20% offset you've been quoted** ***isn't a regulatory ceiling. It's the economic ceiling of solar without storage.***

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WHY THERMAL STORAGE BEATS EXPORT

Three ways to spend a midday solar kWh. *Only one keeps the value.*

EXPORT IT

₱6

/ kWh · Net-metering BGC

Your utility pays you the Bilateral Generation Charge — about half of what you pay to buy electricity back at night. **You lose 60% of the value** on every kWh you exported.

CURTAIL IT

₱0

/ kWh · wasted

No export permission, no demand at midday, no storage. The inverter clips the surplus and it's gone. **Zero value recovered** — the cost of installing solar you can't use.

STORE IT AS HOT WATER

₱13

/ kWh · full retail avoided

Midday solar runs the iHEAT, which charges the iSTOR PCM tank with 60 °C water. Night-shift laundry, kitchen and patient-room hot water all pull from the tank. You don't buy a single kWh at retail to replace it. **Full retail value kept.**

A kWh of solar stored as hot water and consumed at night is worth *2.4× the same kWh exported.*

KARNOT

THE NEXT STEP

Three things from you. *The rest is on us.*

01 **Bed count + laundry / kitchen throughput**

Operational bed count, average occupancy, daily laundry kg, kitchen meals served. Tells us the daily hot-water duty.

02 **12 months of utility + diesel / LPG bills**

Just the front summary pages. We compute today's combined hot-water spend across laundry + kitchen — usually 2–3× what facilities thinks.

03 **Your bank relationship**

DBP, LandBank or BPI — tell us which you already work with. That's the fastest route to the green loan.

WHAT YOU GET BACK

A sized iHEAT platform, a fixed price, a monthly cash-flow plan and the bank application *ready to sign.*

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