

PURA · WE CLEAN AIR WITH PLASMA.

Somebody downwind can smell your process.

Now it is in the permit.

272-bis

Since 2017, Italian regions and permits can set odour limits

200–1,000

ouE/m³ · EU BAT range, biological waste treatment

300 ouE/m³

Outlet limit for composting in several regions

12 Nov 2026

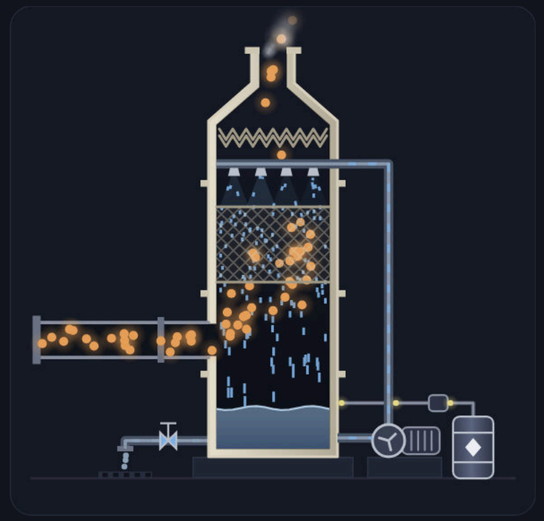
D.Lgs. 197/2026 (IED 2.0): odours now count as pollution

DOWNWIND TODAY PLASMA IN THE PLANT PROOF

Can air clean air?

TODAY'S ANSWERS

Each fix leaves something behind.

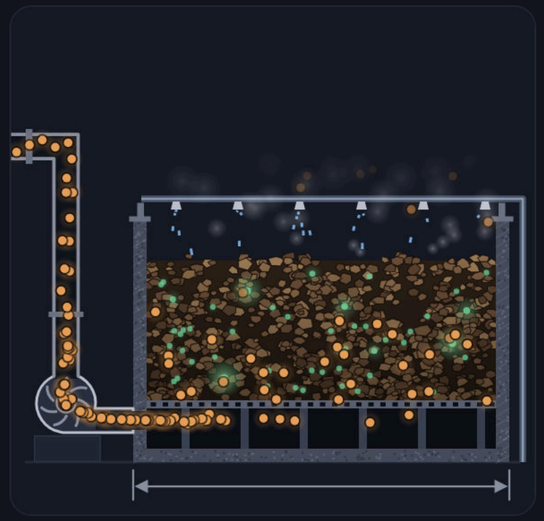


Scrubber

Washes the air with water and chemicals.

LEAVES BEHIND

Reagents and effluent to treat

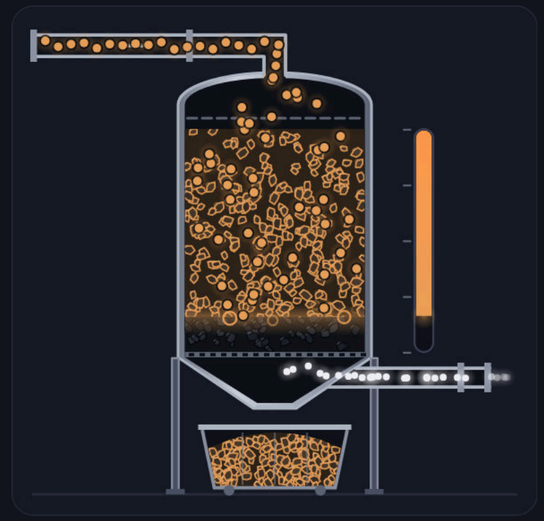


Biofilter

Bacteria on a moist bed of wood chips break the molecules down.

LEAVES BEHIND

A large living bed to keep alive

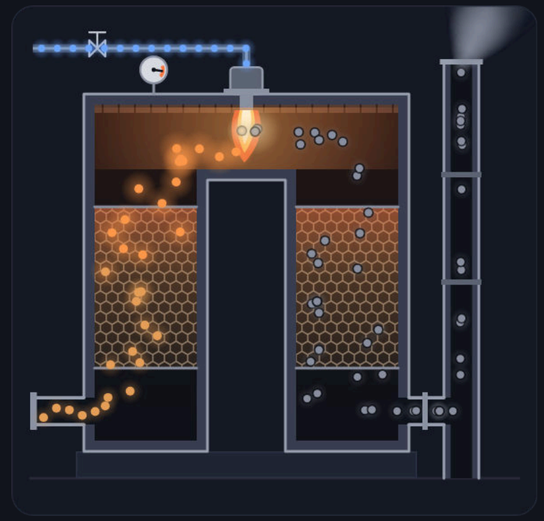


Activated carbon

Traps the molecule on carbon granules without destroying it.

LEAVES BEHIND

Saturated carbon that becomes waste



Thermal oxidiser

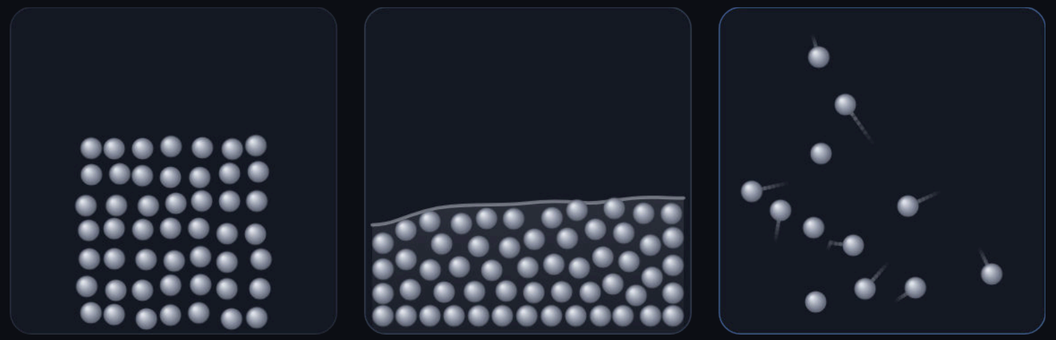
Burns the airflow at about 700 °C with methane.

LEAVES BEHIND

A methane bill and the CO_2 it releases

PHYSICS

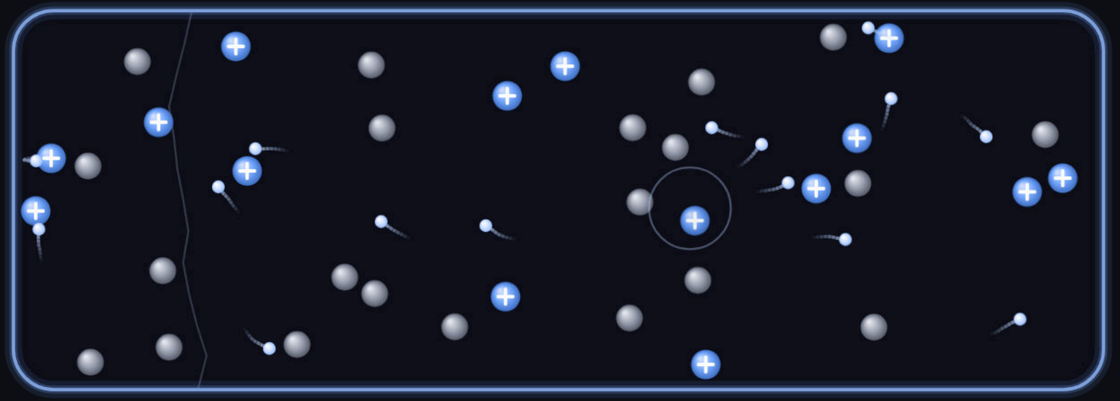
The fourth state of matter.



Lightning and the aurora are natural plasmas.

Plasma

Net charge: 0



MOLECULE POSITIVE ION ELECTRON

An ionised gas that is neutral overall.

A non-thermal plasma, or cold plasma, is an electrical discharge sustained in air at atmospheric pressure and near ambient temperature. The energy goes to the electrons, so it does not heat the gas.





A REAL PURA DISCHARGE

ACTIVATION · PATENTED

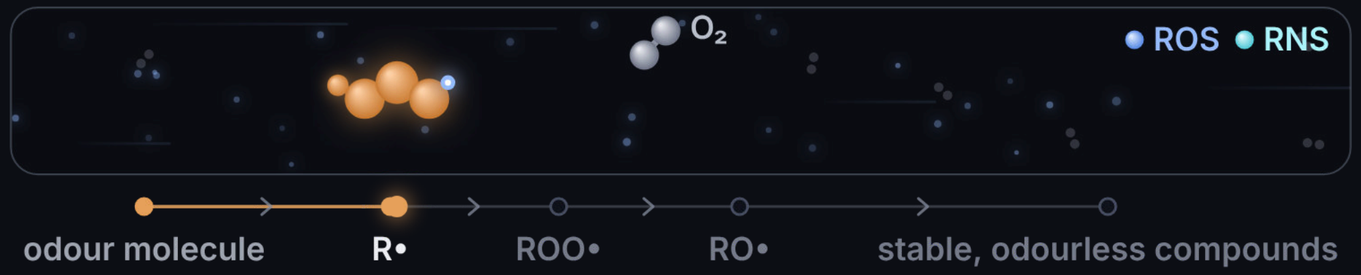
The air becomes the reagent.

PATENTED · WE CONTROL WHICH ACTIVE SPECIES GO INTO YOUR DUCT

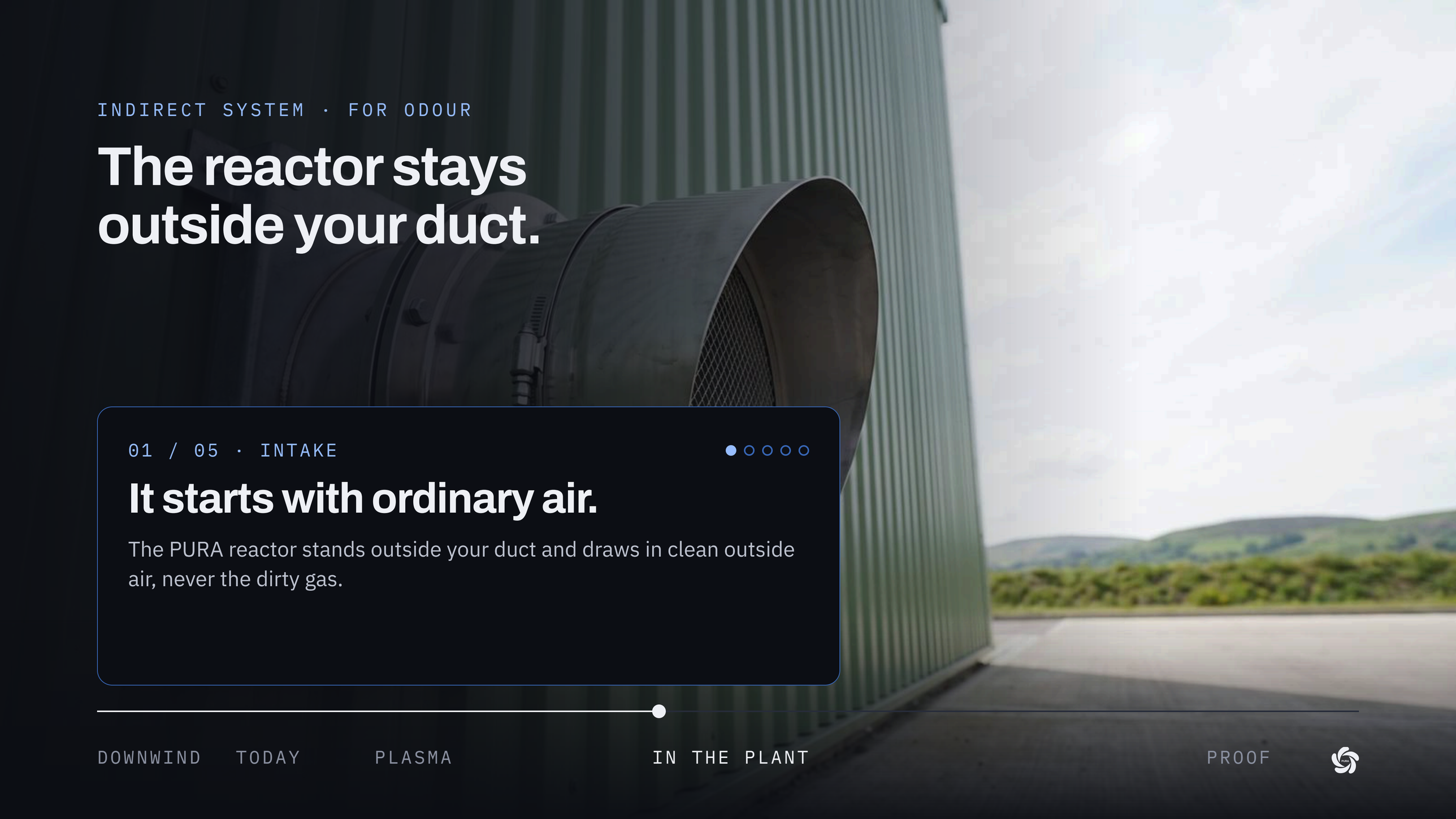
ROS · reactive oxygen species · **•OH** **$•HO_2$** **•O**

RNS · reactive nitrogen species

Made on site out of ordinary air: O_2, N_2 and water vapour split by energetic electrons. •OH is very short-lived.



Not adsorbed, not masked: the molecule that carried the smell is broken apart. **Nothing is trapped.**



INDIRECT SYSTEM · FOR ODOUR

The reactor stays outside your duct.

01 / 05 · INTAKE

It starts with ordinary air.

The PURA reactor stands outside your duct and draws in clean outside air, never the dirty gas.



INDIRECT SYSTEM · FOR ODOUR

The reactor stays outside your duct.

02 / 05 · THE CLEAN LINE

Nothing is added to it.

No chemicals, no water, no gas: only air on its way to the reactor.

INDIRECT SYSTEM · FOR ODOUR

The reactor stays outside your duct.

03 / 05 · THE FIELD

Only a field.

PURA’s non-thermal plasma, at atmospheric pressure, turns that air into ROS and RNS: the active species we choose.

ROS · reactive oxygen species

RNS · reactive nitrogen species



INDIRECT SYSTEM · FOR ODOUR

The reactor stays outside your duct.

04 / 05 · INJECTION

Then it meets the problem.

One injection point. On the reference case, 1,000 m³/h of activated air treats 50,000 m³/h of process air.

INDIRECT SYSTEM · FOR ODOUR

The reactor stays outside your duct.

THE OTHER SYSTEM · DIRECT, FOR VOCs

A different reactor: PURA’s plasma is generated inside the duct and the whole flow passes through it.

05 / 05 · THE REACTION

The molecule breaks.

The reaction runs along a few metres of your existing duct. PURA’s plasma never touches the dirty gas, so it does not foul. Nothing is added to your process line: no bed, no filter.

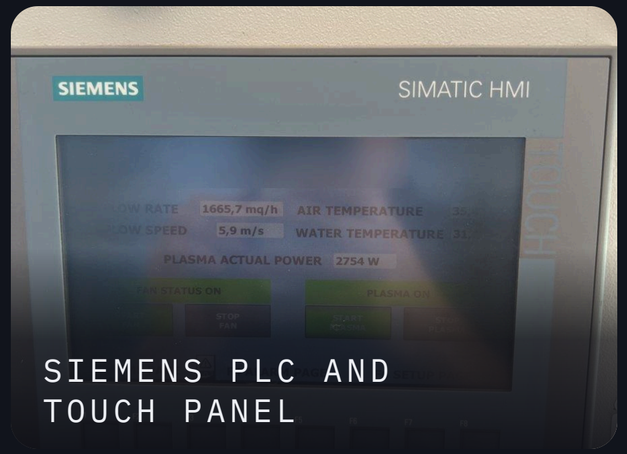
Ozone · 1–40 ppm leaving the reactor · consumed in the duct, before the stack

CONTROL

PURA’s plasma is set to the load.

Odour changes with the shift, the product and the season.





SIEMENS PLC AND TOUCH PANEL

Blue: PURA’s plasma power · steps = set from the PLC · smooth = with the optional electronic nose

PLC

PURA’s plasma density set to flow rate and odour load, re-set when the process changes.

PULSED

High-voltage generator, alternating current, with installed power in reserve for the peaks.

OPTIONAL

Electronic nose at the stack: gas sensors calibrated on olfactometry let PURA’s plasma follow the odour by itself.

INTEGRATION

On its own, or alongside what you have.

PURA's plasma only
Replaces thermal oxidisers, activated carbon and biofilters.

Upstream of a biofilter
Takes out the bulk of the load: the bed stays far from saturation and steadier on peaks.

Upstream of activated carbon
Takes out the bulk of the load: the carbon has less to adsorb and lasts longer.

Downstream of a scrubber
Activated air finishes the compounds water cannot capture.





PURA BESIDE AN EXISTING SCRUBBER · OUR OWN PHOTOGRAPH

Plasma ahead of a biofilter, for start-up and load peaks:
Martini et al., Journal of Cleaner Production 230 (2019) 230–240, University of Trento and CNR.

ENERGY · VARIES WITH MODEL AND SETTING

It runs on electricity alone.

LOWEST EXAMPLE · PURA 200

3 kW

of PURA’s plasma at most in operation · about 6.6 kW drawn in all, with fan and chiller

OPERATION — INSTALLED ≥ 2×

HIGHEST EXAMPLE · PURA 5000

60 kW

of PURA’s plasma available per system, adjustable

OPERATION — INSTALLED ≥ 2×



PURA UNITS IN THE WORKSHOP

PURA’s plasma has at least twice its operating power installed: the reserve for the peaks.

THREE SIZES **PURA 200** **PURA 1000** **PURA 5000** for air flows up to 140,000 m³/h · sized after a site survey

Own closed-loop chiller, no cooling water consumed · No chemicals · No methane · No waste to dispose of

PROOF

Measured, not promised.

Over 90%

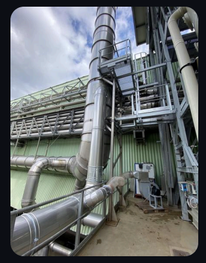
odour abatement
with the indirect system

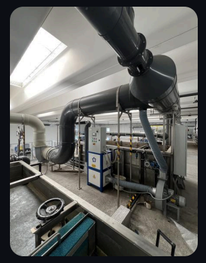
DYNAMIC OLFACTOMETRY, EN 13725,
AT INLET AND OUTLET

20+
systems installed

140,000 m³/h
the largest single line, a paper mill

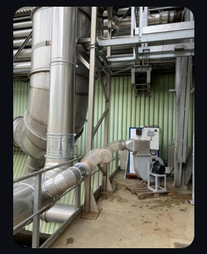
Our own photographs, from plants where PURA runs.









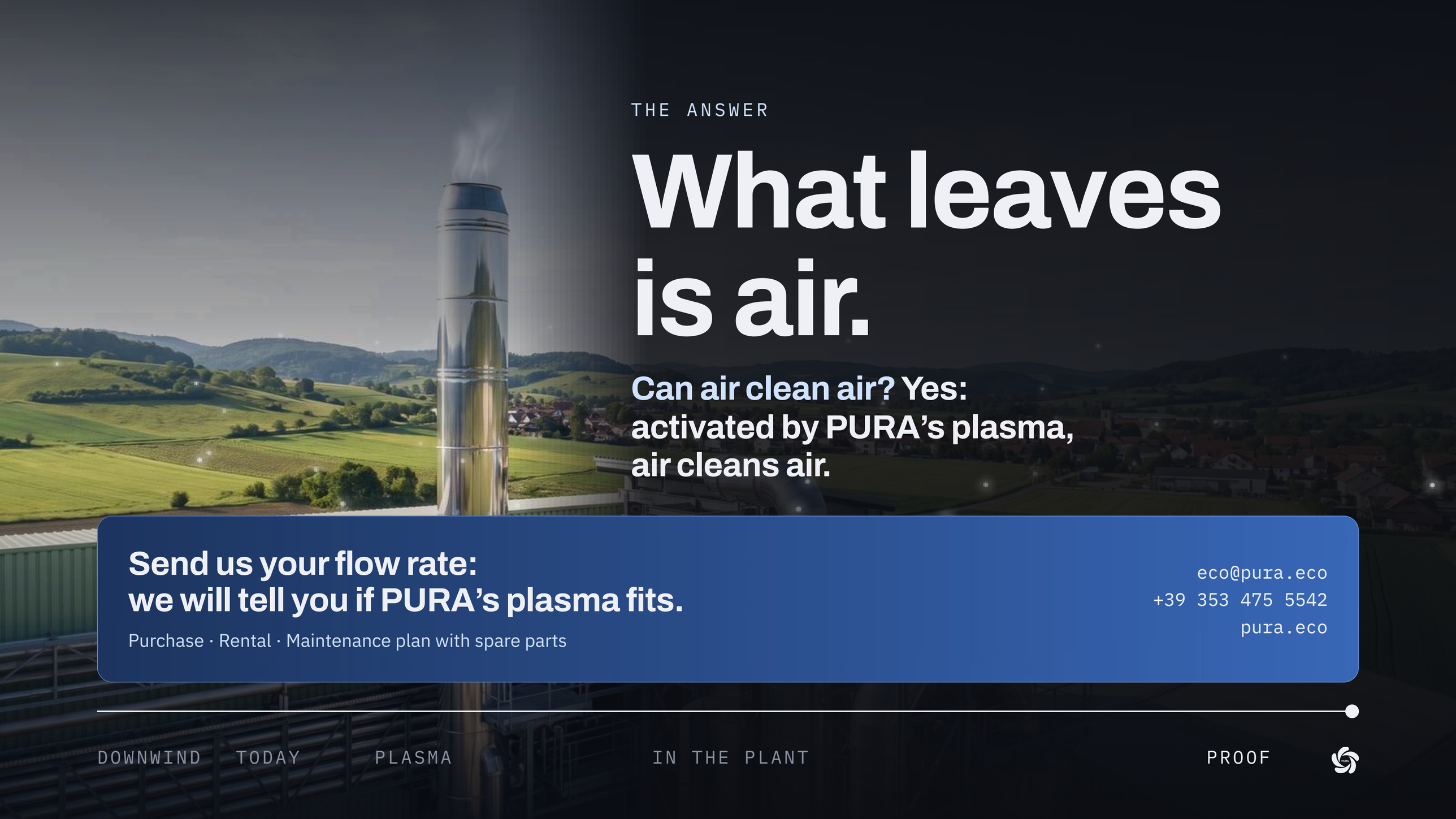













THE ANSWER

What leaves is air.

Can air clean air? Yes: activated by PURA's plasma, air cleans air.

Send us your flow rate: we will tell you if PURA's plasma fits.

Purchase · Rental · Maintenance plan with spare parts

eco@pura.eco
+39 353 475 5542
pura.eco

DOWNWIND TODAY PLASMA IN THE PLANT PROOF