

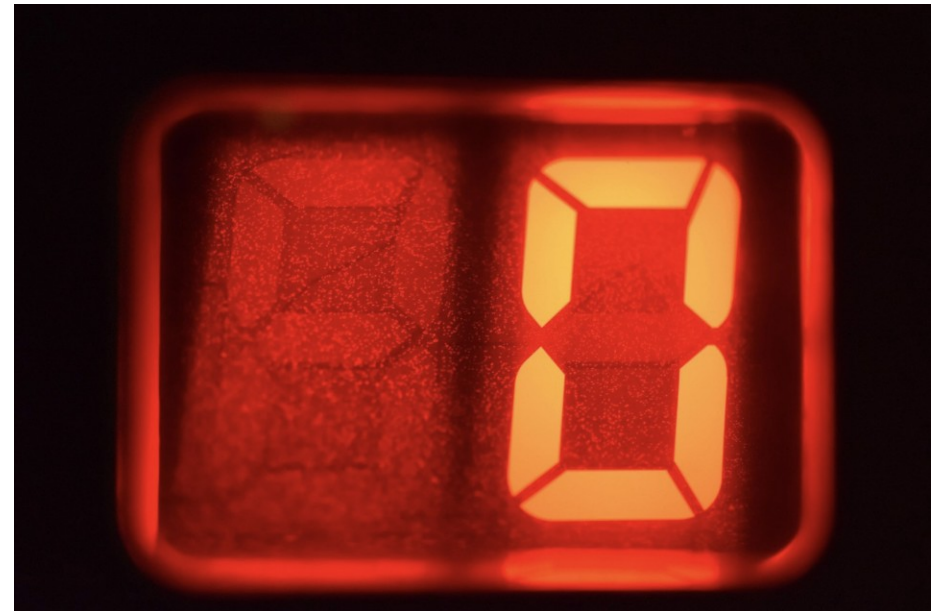
Portugal and Spain blackout and its recovery

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RIPE 90

The zero

What happened
What went off
What did not
A couple of anecdotes
Traffic observatory
What we have learned



What happened

- Monday 28 April 2025
- The black(out) Monday
- 12:33 power grid had a zero like never before
- 15GW vanished in 5 seconds

That's over 12 DeLorean



What went off



Immediately:

- Trains, trams, metro, lifts and red lights
- E-payment systems (only cash)
- Telecommunication services not battery backed (mostly access networks)

Over time:

- Cell networks (data ~2h, calls ~4h)
- Small DCs
- Regional TV/Radio → ES Radio

Gas stations out of service

+

Huge traffic jams

=

Impossible to refill the tanker truck

Power generators tanks went empty





- Airports and hospitals
- National TV/Radio
- Water supply
- Networks cores
- Main DCs (with one notable exception)

Situation in the afternoon:

- No phone (mobile and fixed lines)
- No public transportation
- No private transportation
- No fuel for the generators

That's when creativity kicks in



Cars fuel in a DC

In a small DC in Madrid

- Single generator
- Pulled fuel out of employees cars
- Power restored when they had 20 min left



Police escorting tanker

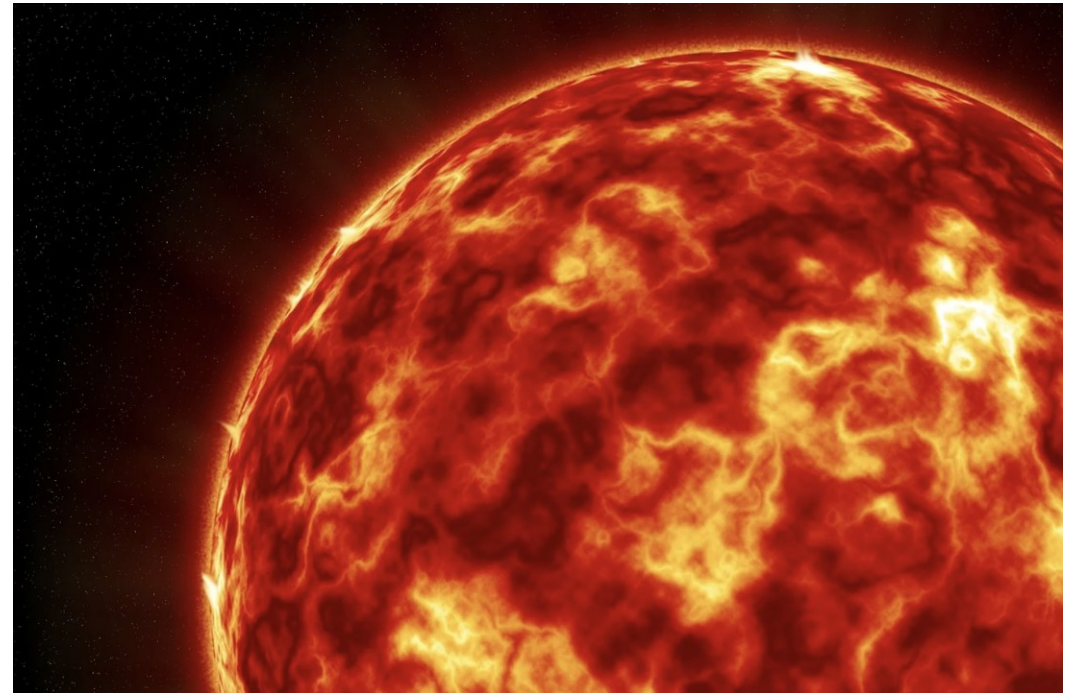


A public water company of Spain

- Had a Tanker Truck stuck in traffic.
- Escorted by the police
- Used to power their Central Operation Location

Satellite phone?

- ESpanix has a Satellite phone to be used in case of emergency
- Completely useless: any other phone was offline anyways



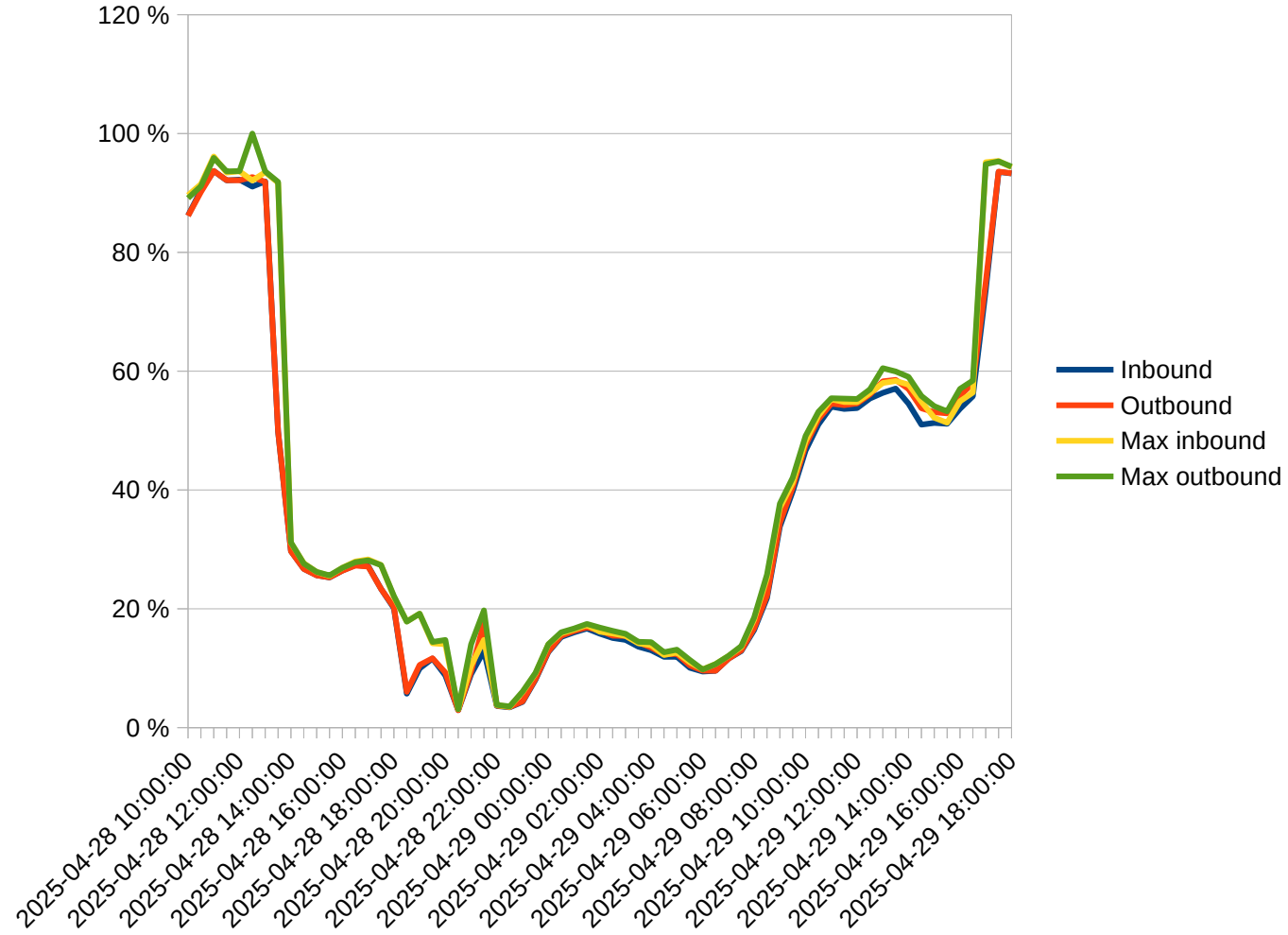
- No phone coverage

BUT

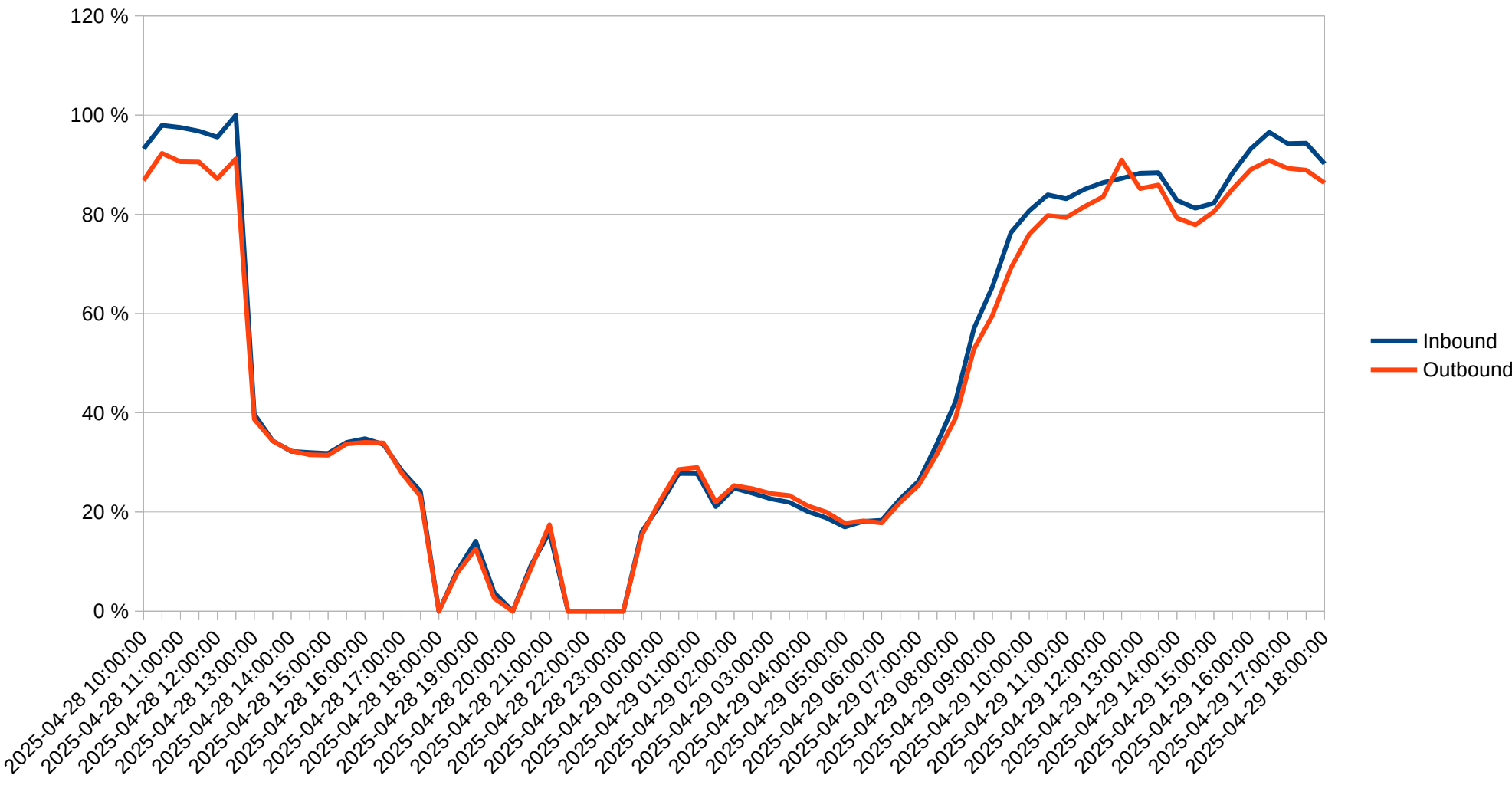
- One of our members still had connectivity between two sites
- They communicate over the routers management port



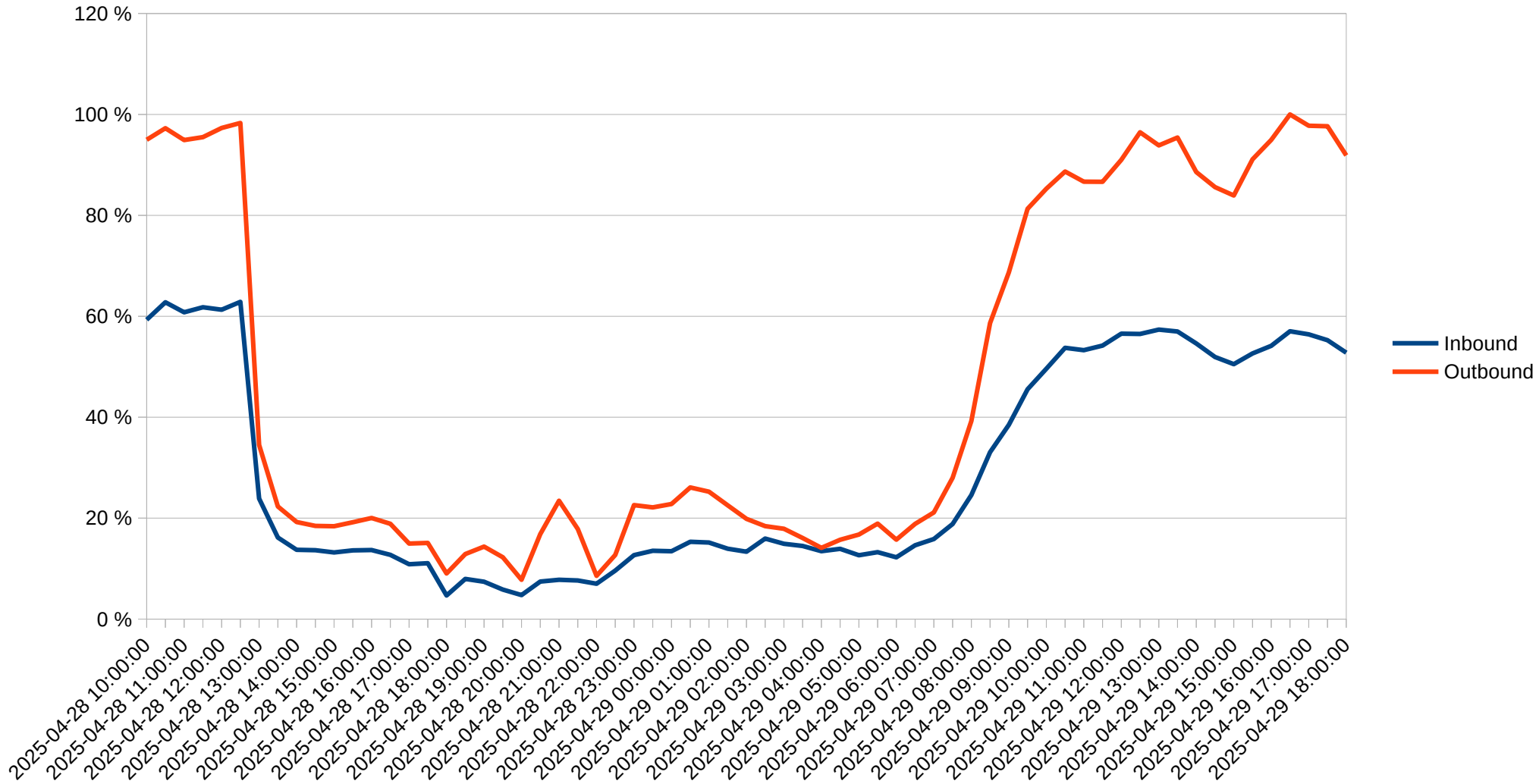
Aggregate ESpanix (Madrid and Barcelona)



ESpanix POP



ESpanix DC



Happy ending



- Recovery took up to 18 hours
(Depending on the area)
- Unexpectedly fast
- Portugal recovered autonomously
- France and Morocco helped Spain
(thank you)
- Politicians had nothing to do with it

Lesson learned

Power restored around
midnight

Change in ESpanix
Contingency Plan

- Power failure: CxO in the DC
- Phone failure: communicate
via Customer Portal



Thank you!

<http://www.espanix.net>