Save >30% of Carbon and Energy from your Buildings Air Conditioning Units

Verv Smart AI Isolator

Hit your ESG and Net Zero Goals!
The **Big Problem: Air Con and Energy Usage**

Global AirCon sales are already **150 million units** per year (2020)**

In 2016, roughly **10%** of the planet’s energy use went towards AirCon*

Global AirCon energy use is expected to **triple by 2050**, reaching a level equivalent to China’s total electricity demand today***

The **Big** Problem within the **Big** Problem: **Air Con** and **Energy Wastage**

Study showed that for every 5 Air Con units measured. They actually drew the power equivalent of running 9 units. A >40% energy wastage and average of £151 - £9402 per year per unit wasted!

This equates to

**WASTAGE of >4% of the world’s power**

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[^2]: https://www.energy.gov/energysaver/maintaining-your-air-conditioner#:~:text=Air%20Conditioner%20Filters,-The%20most%20important&text=Replacing%20a%20dirty%20Clogged%20filter.by%20205%25%20to%202015%25.

2nd Major Problem Costs of Air Conditioning and Heat Pumps: Repair, Maintenance and replacement is EXPENSIVE!

"$5,000 to $10,000, or $25 to $60 per square foot"

Refrigerant Leak Repair Cost

£225 - £1,600

Compressor Replace Cost

£1050 - £1500

$5–75 billion potentially preventable* in the USA alone
Verv Case Studies and Energy Saving!

Verv **Saved 32%** from AC Manufacturer’s unit Energy and Carbon Consumption from a single Unit

Successful Trial Leads to full roll out to Legal and General Headquarters **>450 Units**

Saved the County Hall building hosting Sustainable Workspaces **£6k** from a single water heater
Verv Case Studies and Energy Saving!

"Verv demonstrated a 32% future energy saving through their Smart AI Isolator on a system operating in our building. Fitting a building with these isolators could make everyone’s journey to Net Zero a lot simpler and faster”

– MARTIN FAHEY - Head of Sustainability, Mitsubishi Electric, UK & Ireland
Our **Solution - Verv Smart AI Isolator for Air Con and Heat Pumps**

- Direct replacement for existing Dumb Isolators
- Identical Installation for an electrician with No Special Training needed

Isolators are legal requirement for electrical safety with AC or Heat Pump Units

Existing Isolators are DUMB

verv
✓ Saves Money
✓ Saves Energy & Carbon
✓ Understand Utilisation
✓ Saves Maintenance Costs
✓ Wi-Fi, 3G/4G/5G
✓ BREAM Points
Our Solution: Verv’s AI-Based Predictive Maintenance Software Service Solution

Product Details and Features

✓ ESG and Carbon Reporting
✓ Accurate, real-time energy monitoring and alerts
✓ Remote on / off control – DSR Ready
✓ Predictive maintenance of indoor airflow blockage, capacitor & compressor for Air Conditioning & Heat pumps
✓ Smartphone App
✓ APIs for BMS available
✓ Helps extend product lifetime and Sustainability
Help Achieve **Net Zero** Targets

40%

HVAC energy consumption accounts for more than 40% of a building's total consumption.

If you can't measure it, you can't improve it.

Lord Kelvin

https://www.iotacommunications.com/blog/hvac-energy-consumption-in-commercial-buildings/
Verv - **Net Zero** Tool Set

40% of a building's energy consumption is Air Conditioning

32% energy saving from Air Conditioning

13% of a **total** buildings energy / CO2 consumption saved!

40KWh energy a day from Air Conditioning = £12 per day and £4380 a year

32% Savings = £1401 per year per unit!

**ROI** Less than 6 months! £10k lifetime value per unit
Our No Brainer **Competitive Business Model for Commercial AC**

We are a B2B business

- £299 three phase or £65 single phase off the shelf price *(same price as dumb Isolators!)*

- £9.99 Monthly Subscription for the basic service (or £50 per Annum)

- Ability to upsell and increase the SaaS model profit with increase in features

Unit still works as a “dumb” isolator if turn off the data feed SaaS = 90% GPM

All Sales are through Commercial Channel partners.

Any that are put into residential Heat Pumps or AC are managed and run through installers / maintenance companies who pay us directly.

We are the ‘Intel Inside’ service
Large & Growing **Market: Residential & Commercial with HUGE Net Zero pull**

- **1.9 Billion AC Units Worldwide**
- **6% Yearly Growth**

**TAM**
- 518 Million AC Units
- USA, Europe, Middle East

Easy Marked access to
- 20.2 million new units & £1.4B a year
- **£12 Billion Spent Servicing AC units in USA yearly**

**Service Addressable Market**
- 1% of this is 200k units a year
- £10.4m a year - spent on Isolators alone for those AC
- £100m spent on service revenue per year average

**106,000 Tonnes of CO2 Wasted Yearly w/o verv**
Our Existing Commercial **Traction** and **Route to Market**

**Through Verv Direct Sales Team**
Conversations and traction already in place. Blue chip clients large volume, Long sales cycle

**Channel Partners**
AC and Heat Pump Installers and Maintenance companies. These companies to the left have already brought Verv units. Medium volume but Short Sales Cycle

**Distribution Partners**
This is where we get our volume sales. Already in early comms with RS and Europa. These companies sell between 10K to 100K a month of dumb isolators

Product Development partners worth mentioning which could lead to other future rollout routes
Customers and Traction to Date> 500 Units sold to date

- **Mitsubishi**
  - 2nd Trial Established - 1st Trial Demonstrated 32% saving at their Hatfield head office

- **Legal & General**
  - Have rolled out units to their entire new Flagship head office in Cardiff

- **Sustainable Workspaces**
  - Entire top floor of County Hall - 1st Trial Saved £6k from a single Water Heater malfunction

- **Hilton**

- **Larkfleet Homes**

- **KFC**

- **Elite Renewables**

- **Friday’s**

- **Evans Electrical LTD**

- **Verv**
Our Solution - Verv Smart AI Isolator No Brainer Business Model

✓ Fault diagnostics
✓ Power Monitoring
✓ Fault Pre Detection
✓ Utilisation Information
✓ Wifi, bluetooth or 3G/4G/5G

✓ Same upfront Cost

Verv has subscription SaaS model

X No Fault Detection
X No Fault Diagnostics
X No Power Monitoring
X No Utilisation Information
X No Wifi, bluetooth or 3G/4G/5G

Identical Installation for an electrician

Eaton ABB

Competitors

Kraus & Naimer
The Verv technology is protected by 7 historic patents (Earliest 2009). Most are granted already in UK, USA and EU.

- Citations include, Microsoft, IBM, Ebay and LG to name a few.
- License Technology to Large US Technology company for >£1m.
- Already won awards from the likes of Vodafone “Most Disruptive Tech”. Electricity safety first – “Best Innovation”, CogX AI award for “Best IoT Device” and Meaningful Business top hundred companies as well as Forbes - “Top five scales ups to watch”.
Key Team Members

**James Strickland**
(COO)
- Chartered Engineer *30 years experience* in Consumer Electronics, Industrial Control
- Led the strategy at Freesat - *4m units sold*
- Ex CTO Sky satellite & IP infrastructure in the creation of the ‘gold standard’ SkyQ platform

**Peter Davies**
(CEO)
- Multiple Award-winning serial entrepreneur in tech and energy space
- Background in Machine Learning and Engineering
- Voted Meaningful Business Leader top 100 and startup to watch 2020 Forbes

**Steve Foster**
(CFO)
- Previous CFO Of Opus Energy which sold for >£350m
- Chartered Accountant with 20 Years in Energy Sector
- 1st Class Honours from Cambridge University in Economics

**Dr Luke Miller**
(CAIO)
- Doctor of Philosophy (DPhil), Statistics and Probability University of Oxford
- Papers published include: Classification of multiple time signals using localized frequency characteristics applied to industrial process monitoring
- Ex Travelex

**Amanda Waller**
(COS)
- Ex Ignite - Operations Manager, ran investment Accelerator program for Ignite
- Ex Centrica Labs Operations Manager - working in the Venture team accelerating Innovation
- Took 130 employees working through the startup toolkit, with two ideas receiving investment totalling £17.8m
Board & Advisors

James Cameron
https://www.linkedin.com/in/jamescameron4/
(Chairman)

- Business Leader of the Year Business Green Awards
- Founder Climate Change Capital
- Non Exec Octopus renewables Energy Trust and GE Ecomagination

Nick De Mestre
https://www.linkedin.com/in/nicholas-de-mestre-32a90514/
Strategy / Real Estate

- Ec Managing Director Landsec
- Managing Director Centrica Distributed Energy and Power
- Head of Investment Land Securities

Stephen Page
https://www.linkedin.com/in/stephenrouatt/
Capital Raising

- CEO SFC Capital (biggest SEIS Fund in UK)
- Seed Fund of the year 2021
- Founder freeman of the Guild of Entrepreneurs

Andrew Wordsworth
https://www.linkedin.com/in/andrew-wordsworth/
Sustainability

- CEO Sustainable Ventures
- Owner Largest Sustainable workspace in London
- Former Managing Director at Carbon Trust Enterprises

Stephen Rouatt
https://www.linkedin.com/in/rouatt/
Sales/ Real Estate

- ex-CEO Signify UK (Philips Lighting)
- Ex Managing Principal - Strategy and Innovation ING Bank
- Ex McKinsey
Financial Model Revenues

- **First Sales and Early traction**
  - Successful First Trial with Mitsubishi Electric
  - EU Market Expansion
  - Middle East Market Entry
  - US Market Entry
  - Austin Texas Trial lined up for Early 2023
  - Government of Dubai is already an investor

- Roll out Channel Strengthened
- AC Manufacture Partnerships Rollout
- On Second Trial Already with Mitsubishi Electric
- Further Distribution Partnerships to be established prior to IPO

- Revenue
  - Break Even
  - 2021: 1M
  - 2022: 20M
  - 2023: 100M
  - 2024: 200M
  - 2025: 100M
  - 2026: 200M
Investment Opportunity - EIS

>£1m Runway of 18–24 months

2021/22
Seed Round 500k
Grants secured 750k
Product Development
Product Proof
Patent Development

Pre A Round 750K
Early Sales, CE Marking - Proof of Markets in USA & Europe

A-Round £3-5M
Product scalability, Sales and Marketing ramp up, USA and Middle East Expansion (750k already secured from existing investors) - EIS Approved

B-Round 15M
ASIA Expansion

2026
EXIT

AC Manufacturer roll out partner
Predictive Maintenance Solutions: **Expansion Markets and IP Licensing**

**Smart Home**
- Retrofitted Home Appliances
- Verv Super Smart Plug

**Integration**
- Circuit Board / Direct-to-Appliance
- Verv Chip Integration

**Other Industrial**
- Retrofit or Direct
- Verv Smart Isolator
- Heat Pumps, Motors, EVs

- Project already completed trial with large Appliance Manufacturer to license the platform
- Proposal already sent to Large AC Manufacturer to license Hardware
- Already had requests from EV, Battery, Solar and Asset monitoring companies
Expansion Markets and IP licensing opportunities

Huge commercial cross over value and desire in OEM and engineering sectors

- Heavy Industry
- Engineering
- Agriculture
- Automotive

- verv holds Nine Patents plus Families across UK, EU, USA and China
## Financing Plan

### Key Points
- IP independently valued at £14m
- Traction and customer pull proven
- Won Grants - £1m+

### Now
- Trial with Air Con Manufacturer, ramp-up sales traction
- Use of funds - Bring in sales

### Series A
- Seeking £3-5m raise
- Have £750k already verbally committed from existing investors

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**EXIT GOAL**  
Stock Exchange Group

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**Competitors**  
- Smart Appliances
- AC Manufacturers

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**verv**  
- ABB
- Samsung
- Mitsubishi
Executive Summary - Investment opportunity

Transformative AI Power Management delivering a lower cost, ESG compliant Built Environment

- Sold approx **500** units to large corporates including L&G, Mitsubishi Electric and Hilton Hotels
- Existing IP independently valued at >£14m (cited by the likes of Microsoft, LG & Toshiba) Licensed already for >£1m
- Won Energy Grants for product development from BEIS and Innovate UK > £1m
- Awarded **Air Conditioning Product of the Year** at the prestigious RAC Heating and Cooling awards 2022
We would love to have you supporting our mission

peter.d@verv.energy

Thank you

verv