Liquid Cooling Market Update: Industry Dynamics- Adoption Signals- and the Road to Scale

Rolf Brink *CEO, Promersion*

OPEN Compute Project SOLUTION PROVIDER®

OCP BRONZE™ Member

Independent across the whole thermal path

PROMERSION B.V. · LIQUID COOLING STRATEGY DEVELOPMENT

PROMERSION

WHO WE WORK WITH

ACQUISITION IT envelope			TRANSPORT the seam	REJECTION facility envelope
Silicon vendors	ODM/OEM & integrators	Fluid chemistry	Component & supply chain vendors/developers	Data center operators & colocation

Connected to every player, owned by none

Vertically integrated operators & investors

FROM INDUSTRY EDUCATION TO DECISION ASSURANCE

Industry training	Industry analytics	Strategy & alignment	Due diligence	Decision assurance
How the industry really works	Market clarity from real adoption	Ambition made executable	Technical and market durability, validated	Critical calls free of bias and lock-in

TRACK RECORD

Chair

OCP Immersion Project, co-architect of OCP cooling communities since 2018

Co-author

Thermal Boundaries in AI Infrastructure, OCP whitepaper

On track

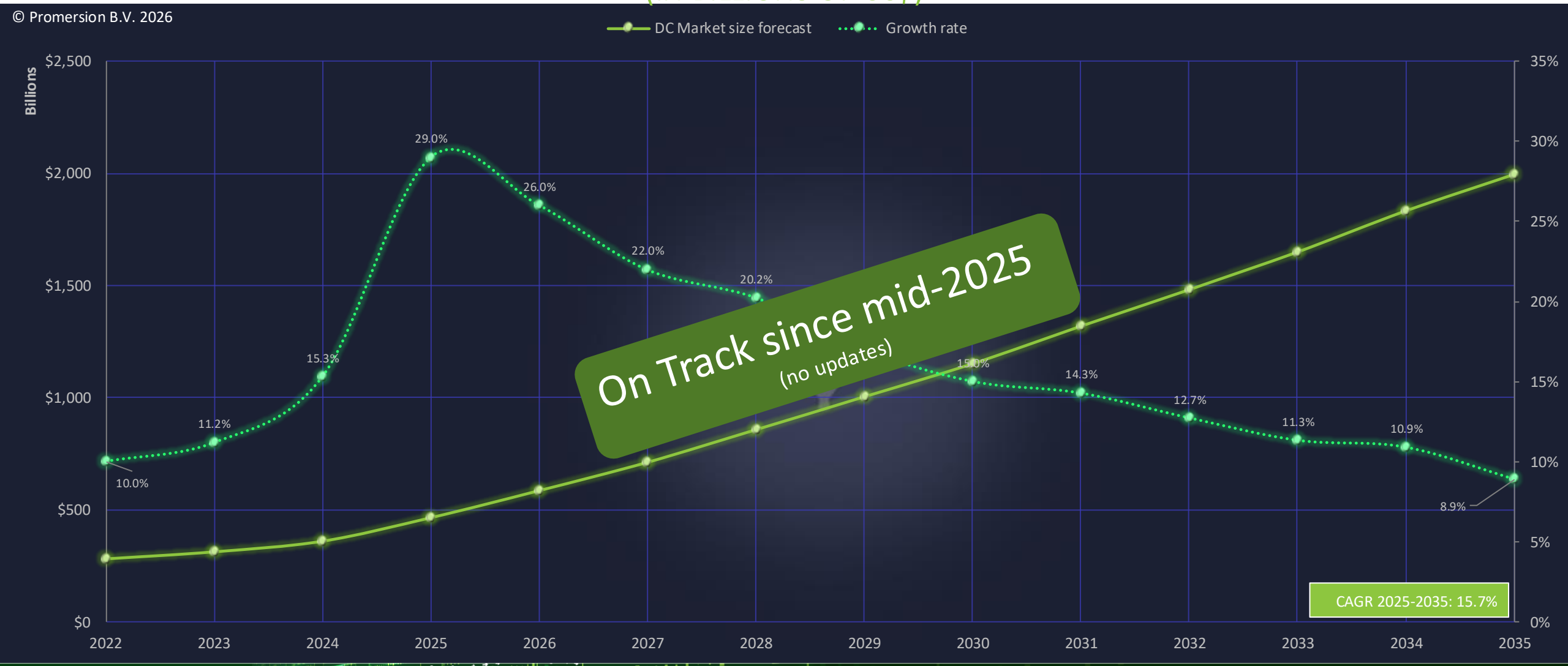
Liquid cooling market forecasting since 2024

Independent by design: no hardware, no fluids, no facilities to sell.

https://promersion.com

DC MARKET SIZE FORECAST UPDATE
(IN BILLIONS OF US$)

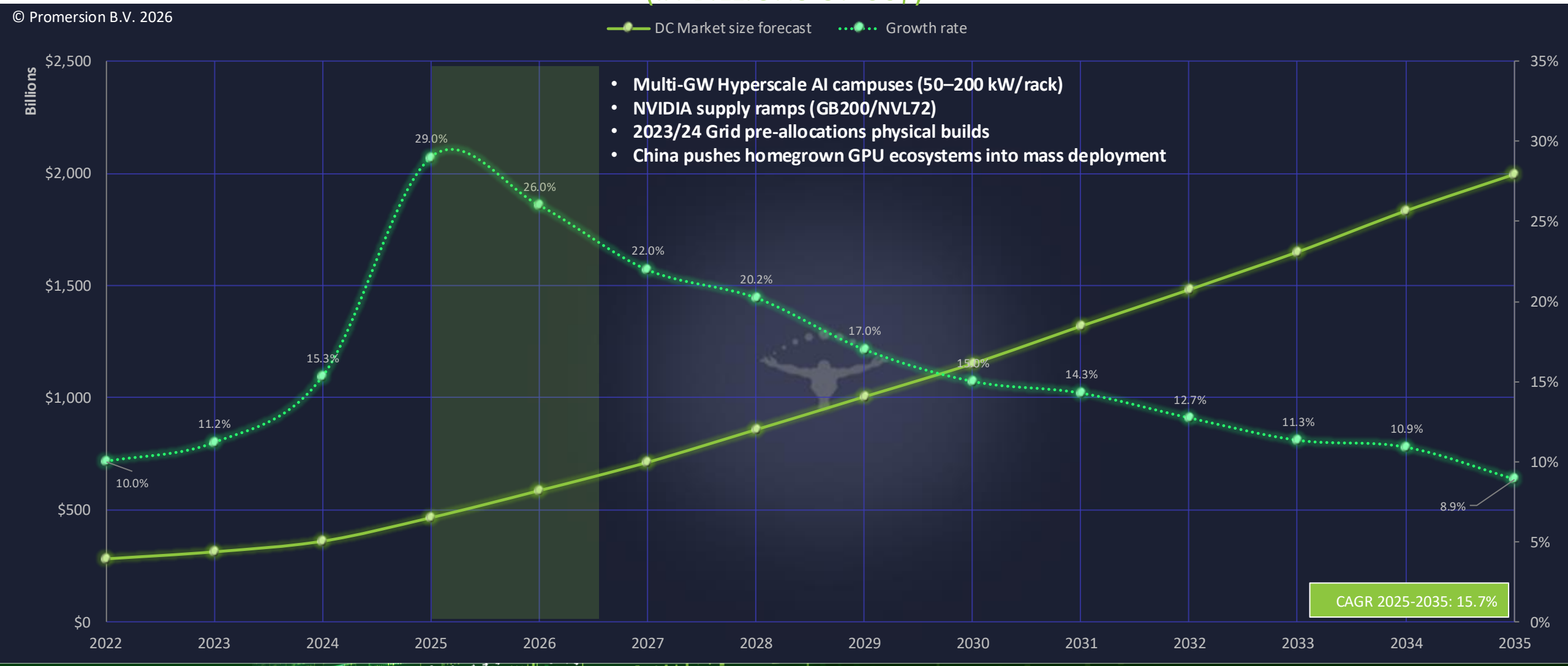
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OCP GLOBAL SUMMIT | 2026
Scaling Innovation for the AI Era.

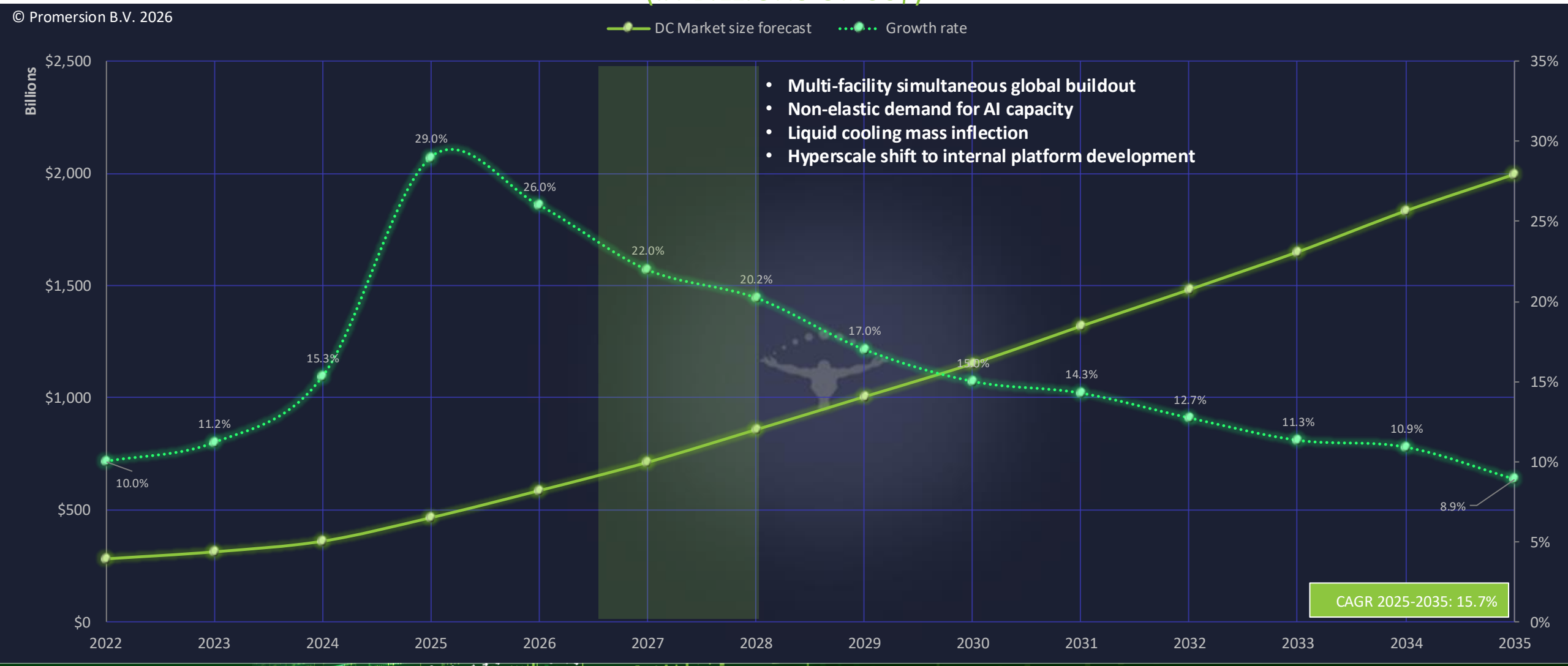
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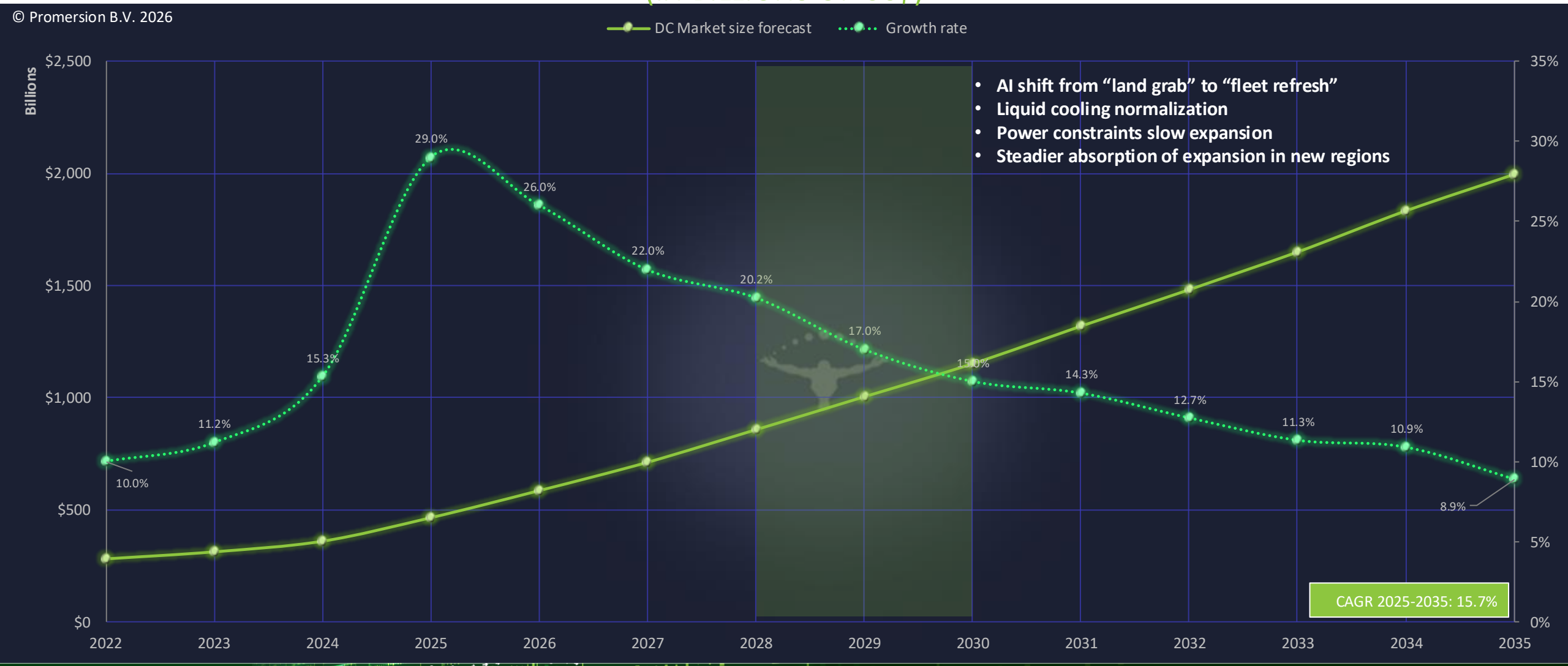
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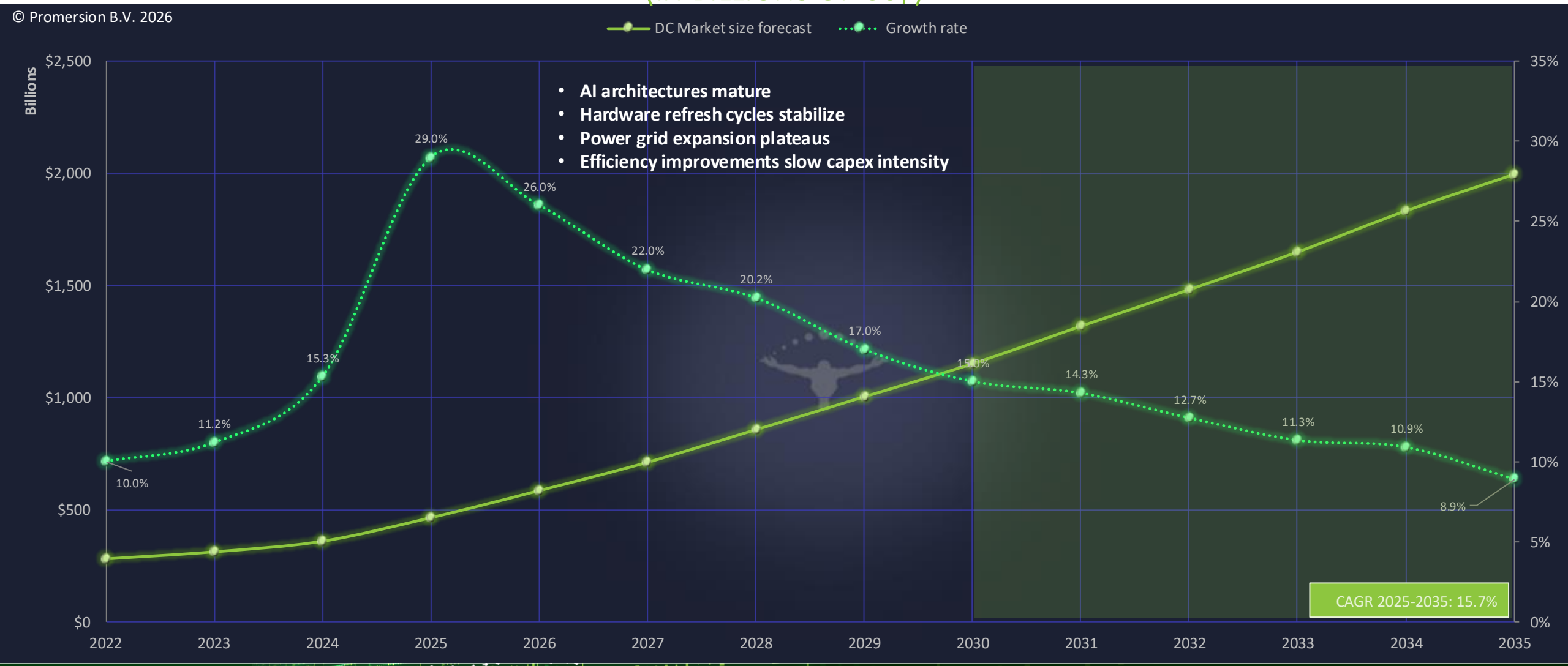
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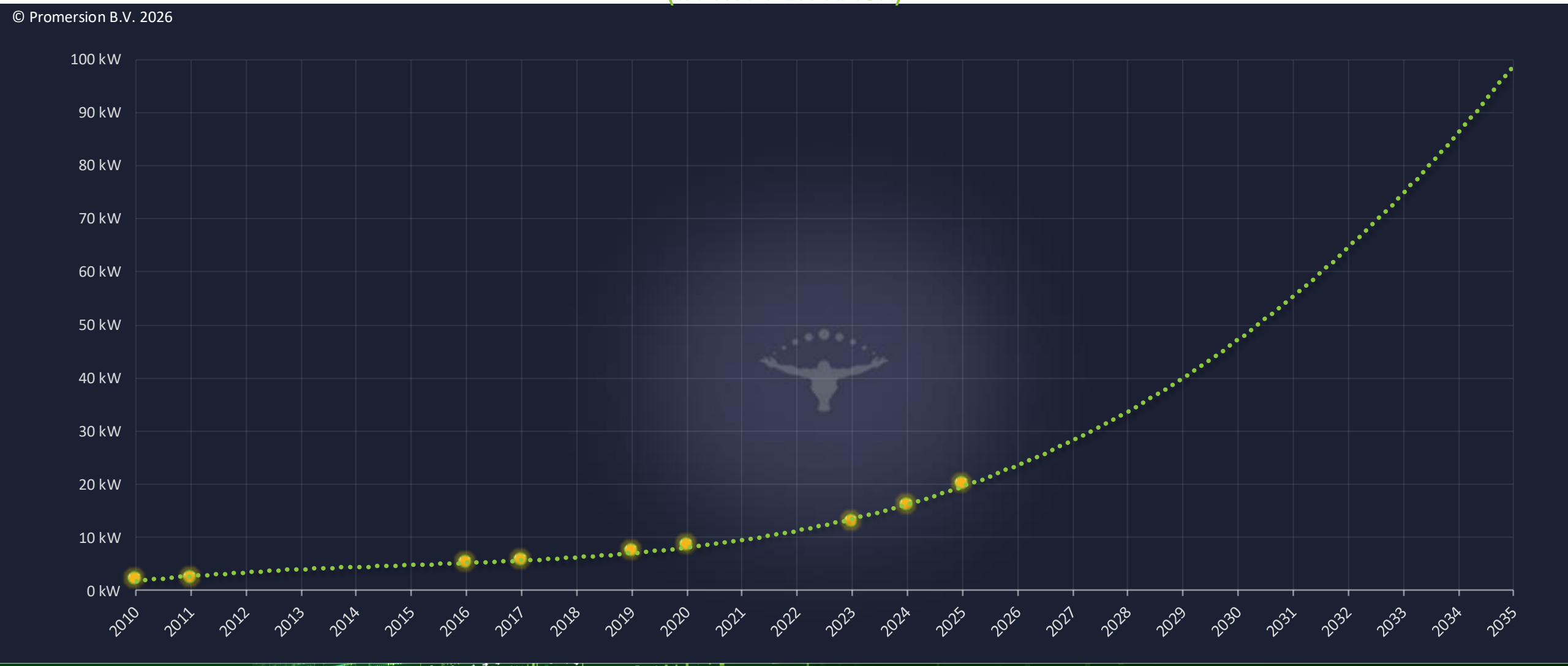
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GLOBAL AVERAGE RACK DENSITY GROWTH 2010-2035

(IN KW PER RACK)

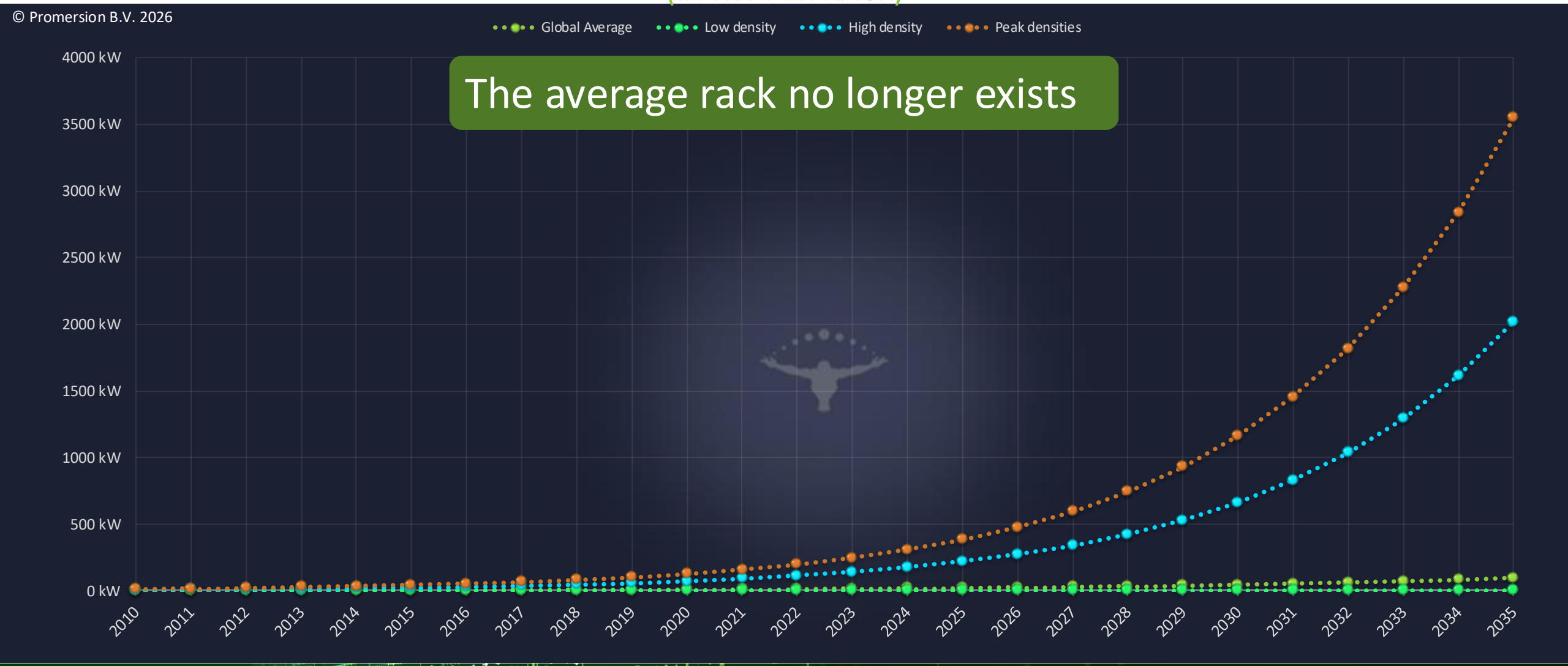
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RACK DENSITY DISPERSION 2010-2035

(IN KW PER RACK)

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RACK DENSITY DISPERSION 2024-2035

(IN KW PER RACK)

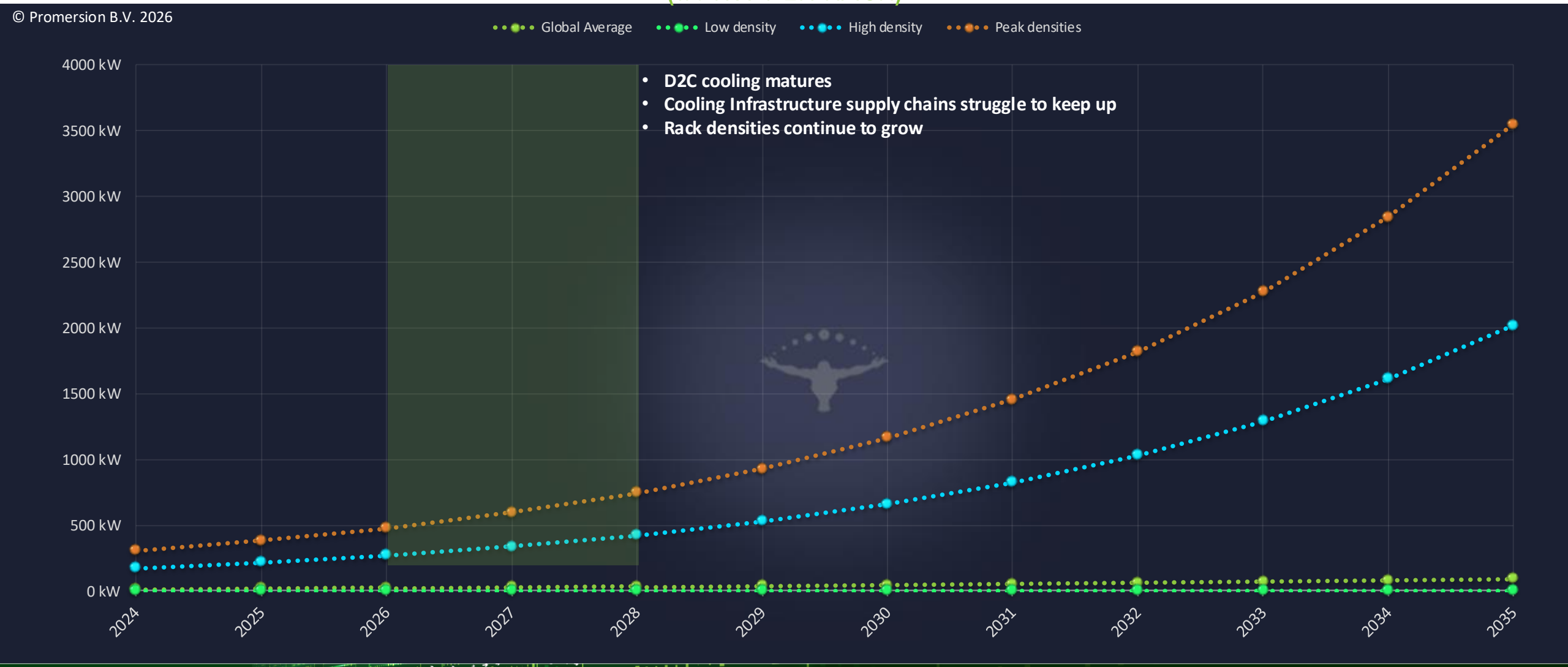
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RACK DENSITY DISPERSION 2010-2035

(IN KW PER RACK)

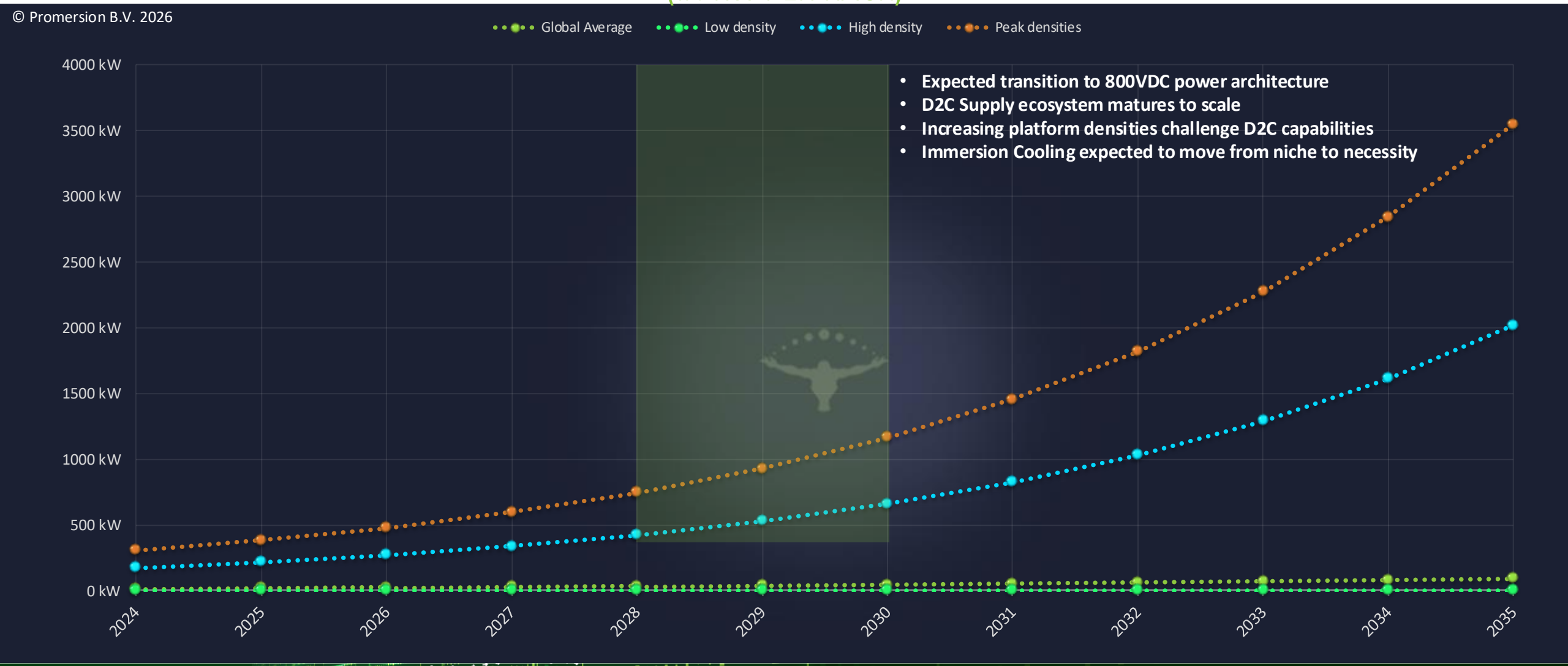
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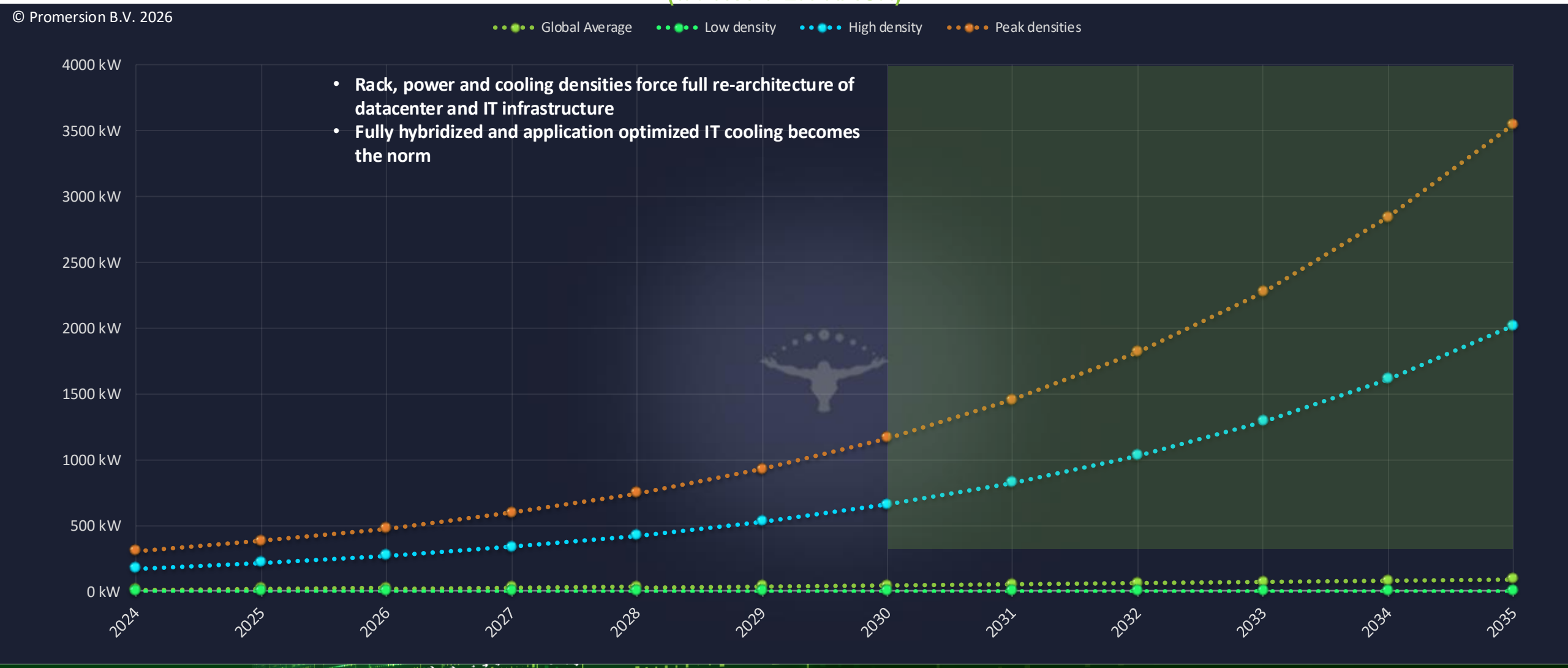
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(IN KW PER RACK)

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GLOBAL LIQUID COOLING MARKET SIZE FORECAST UPDATE

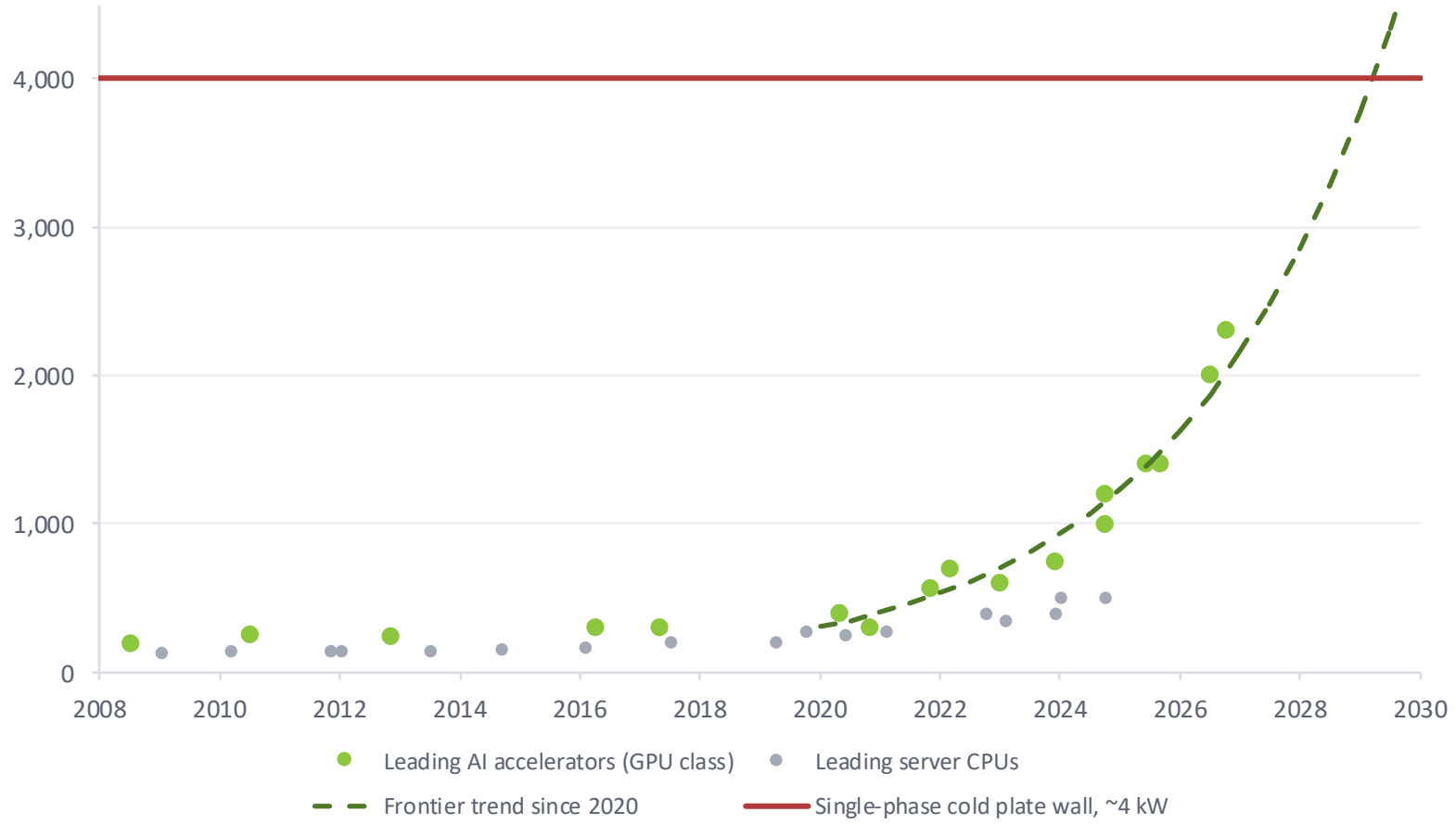
(IN BILLIONS OF US$)



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Scaling Innovation for the AI Era.

The silicon sets the clock

PACKAGE POWER OF LEADING PROCESSORS, W



Data: Thermal Boundaries in AI Infrastructure chart set (vendor TDP disclosures).

≈ 2.3 kW

Leading accelerator package power on 2026 roadmaps

~ 4 kW

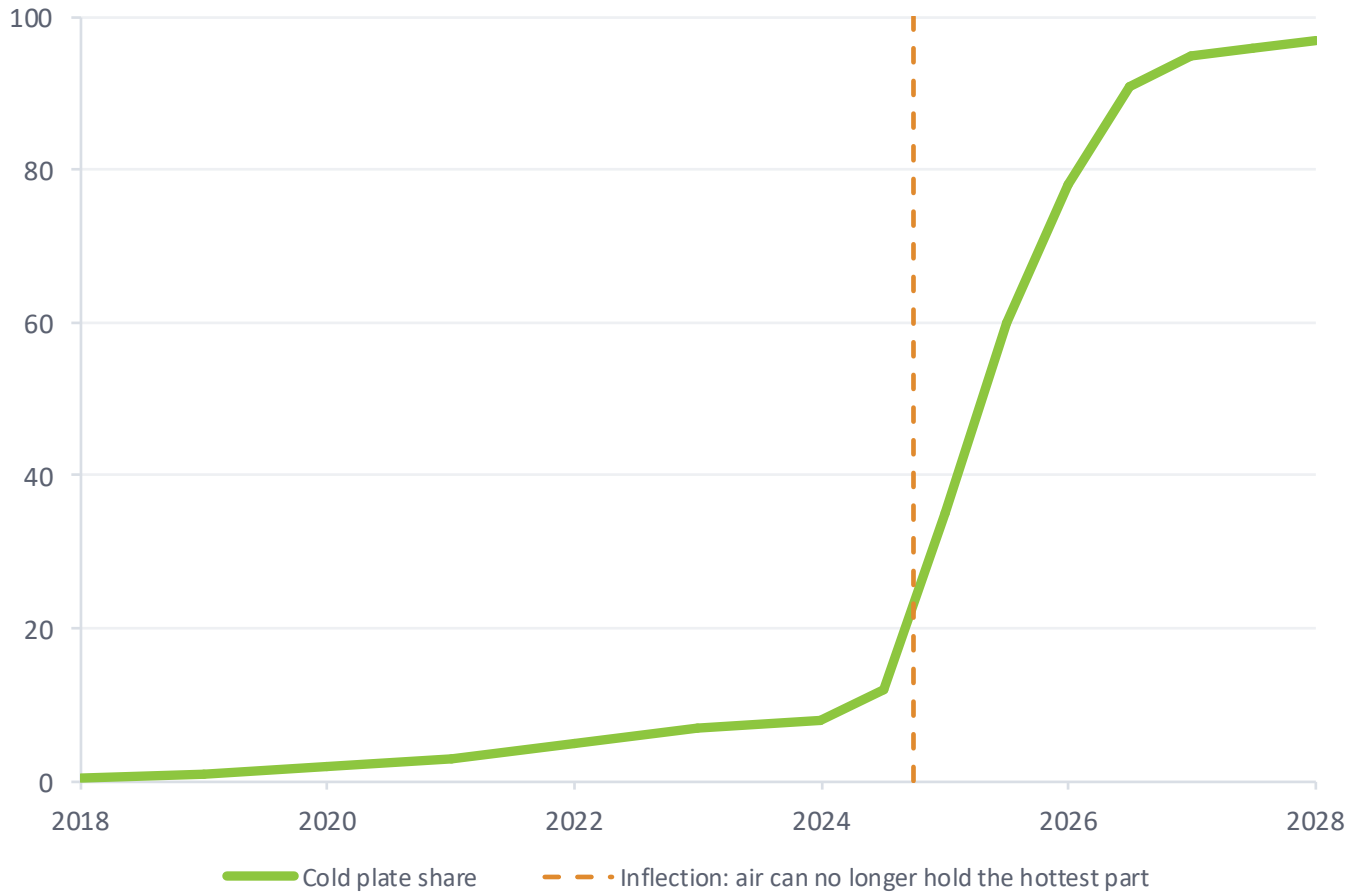
Physics wall of single-phase cold plate on a reticle-class die

≈ 2029

Year the post-2020 frontier trend reaches that wall

Transitions are forced, not chosen

SHARE OF TOP-TIER ACCELERATOR TDP SHIPPED ON COLD PLATE, %



Source: Thermal Boundaries in AI Infrastructure, an OCP whitepaper from Promersion, Oracle, Avayla and Meta. CC BY-SA 4.0.

"An ecosystem exhausts every option that preserves its current architecture before it accepts one that changes it."

THE LEAST-DISRUPTION LAW

Under 10% to above 90% in about 24 months.

Air did not lose a comparison. It ran out of room.

The thermal path

ACQUISITION | TRANSPORT | REJECTION

ACQUISITION
Heat off the component

Cold plate, immersion, in-chip

IT envelope · 2-3 year clock

TRANSPORT
Heat from IT to the facility

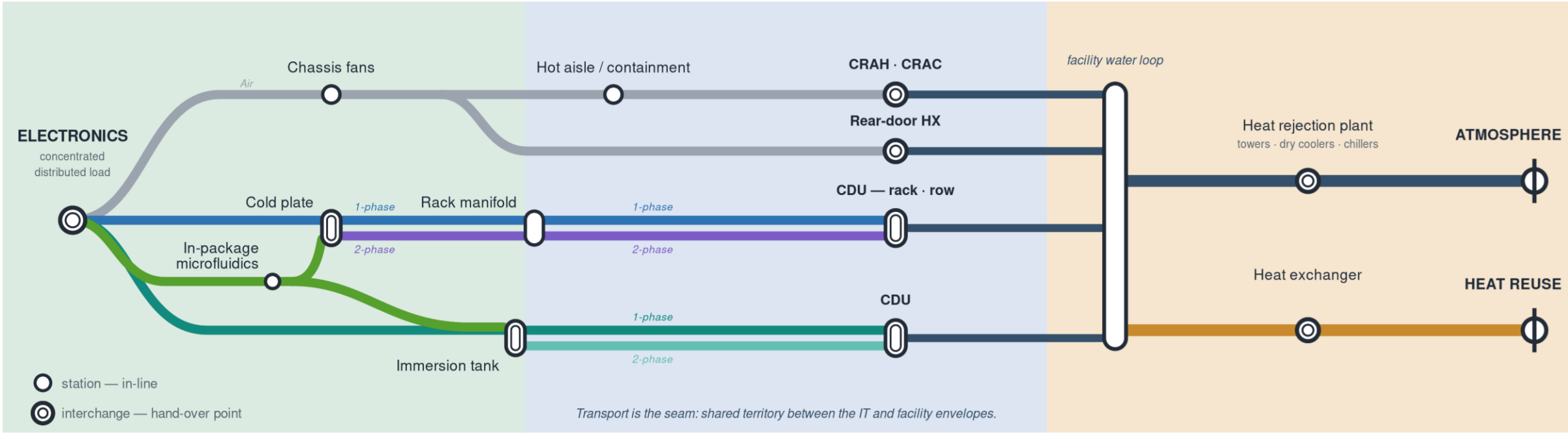
Manifolds, quick disconnects, CDU, loops

The seam · shared territory

REJECTION
Heat out, or to reuse

Chillers, dry coolers, towers, heat reuse

Facility envelope · decades





Source: Thermal Boundaries in AI Infrastructure, an OCP whitepaper from Promersion, Oracle, Avayla and Meta. CC BY-SA 4.0.

“Cooling” now means three jobs

ACQUISITION | TRANSPORT | REJECTION

“Cooling” in the liquid era

“Cooling” in the air era

ACQUISITION
Heat off the component

Cold plate, immersion, in-chip

IT envelope · 2-3 year clock

TRANSPORT
Heat from IT to the facility

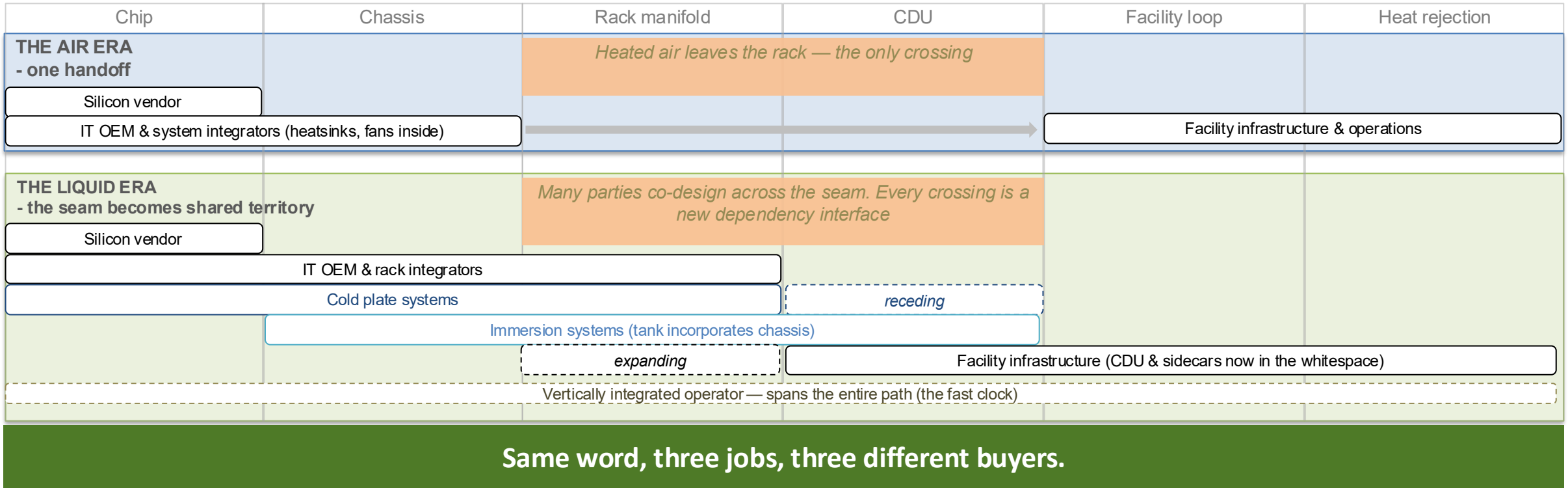
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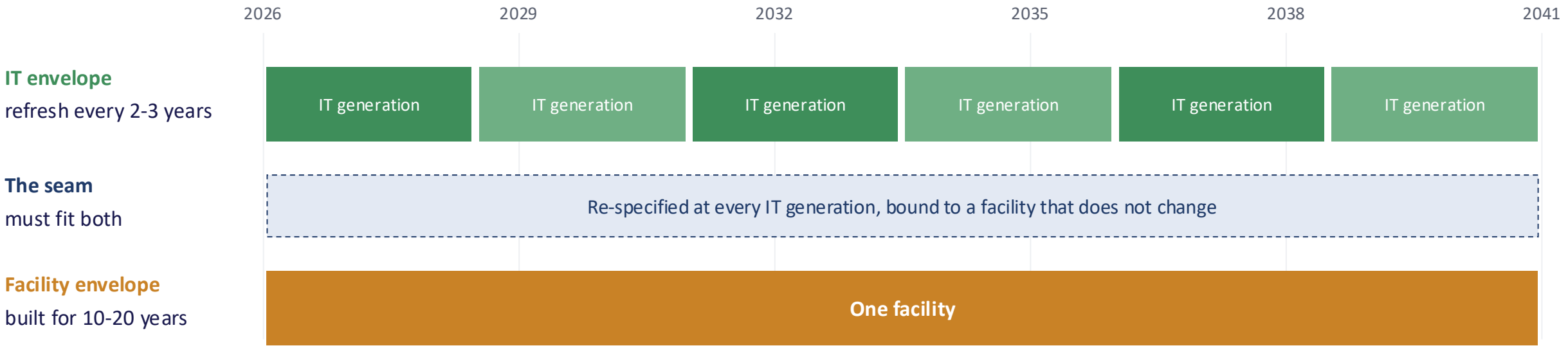
Same word, three jobs, three different buyers.

Source: Thermal Boundaries in AI Infrastructure, an OCP whitepaper from Promersion, Oracle, Avayla and Meta. CC BY-SA 4.0.

Two industries, two clocks

ACQUISITION | TRANSPORT | REJECTION

ONE FACILITY, MANY IT GENERATIONS



Buyer	Platform, OEM, ODM	Owner, operator, MEP
Standards home	OCP, OEM specifications	ASHRAE, codes, local regulation
Business model	Product cycles, design wins	Projects, long-life assets

Different buyers, different standards, different clocks: two industries, not one market.

Source: Thermal Boundaries in AI Infrastructure, an OCP whitepaper from Promersion, Oracle, Avayla and Meta. CC BY-SA 4.0.

Strength does not cross the seam

ACQUISITION | **TRANSPORT** | REJECTION

1 **Organisations run on one clock.**

Processes, sales motions and incentives are tuned to product cycles or to long-life projects, rarely both.

2 **Adjacency is not synergy.**

Across the seam looks like a short step on a diagram. In practice it is a different market: buyers, qualification, standards, cadence.

3 **The seam rewards interfaces, not ownership.**

Value forms where one server can be cooled by many facilities, and one facility can host many servers.

First question: which side of the seam are you on, and which clock do you run?

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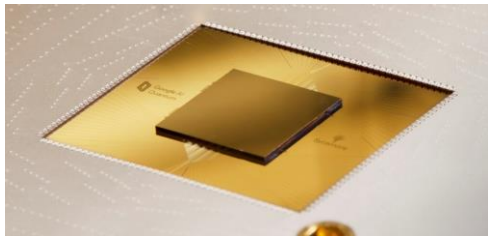
Recommended additional reading



PUBLISHED ON LINKEDIN · DEC 10, 2024

THE RISE OF NECESSITY: WHAT COLD PLATE ADOPTION MEANS

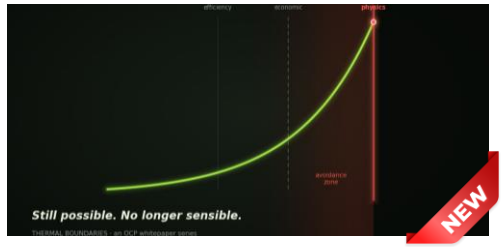
This article explains why the adoption of cold plate cooling is not driven by preference or optimization, but by necessity. It outlines how IT platform evolution, power density growth, and architectural constraints are forcing a structural shift in cooling choices, and what this inevitability means for the future role of immersion cooling.



PUBLISHED ON LINKEDIN · JAN 28, 2025

PROJECTING THE COOLING LANDSCAPE OF 2030

This article looks beyond the initial inflection point and explores how the cooling ecosystem is likely to evolve toward 2030. It outlines a more fragmented and diverse landscape, where air, cold plate, and immersion cooling coexist, each aligned to specific workloads, power densities, and operational models.



PUBLISHED ON LINKEDIN · SEP 2, 2026

WHERE COOLING STOPS MAKING SENSE: THERMAL BOUNDARIES

This article opens the Thermal Boundaries series, built on the OCP whitepaper of the same name. It introduces the three boundaries every cooling method eventually meets, efficiency, economic and physics, and the avoidance zone between them, where most of the industry's cost and risk quietly accumulates. Together these form the vocabulary for reading any cooling technology as a position on a map rather than a contestant in a bake-off.

promersion.com/articles/

NEW

[Thermal Boundaries Article Series]

Thermal Boundaries in AI Infrastructure

Rolf Brink *CEO, Promersion*

Mohan J. Kumar *Architect OCI, Oracle*

Steve Mills *Technical Lead, AI hardware & data center design, Meta*

Kelley Mullick *CEO, Avayla*

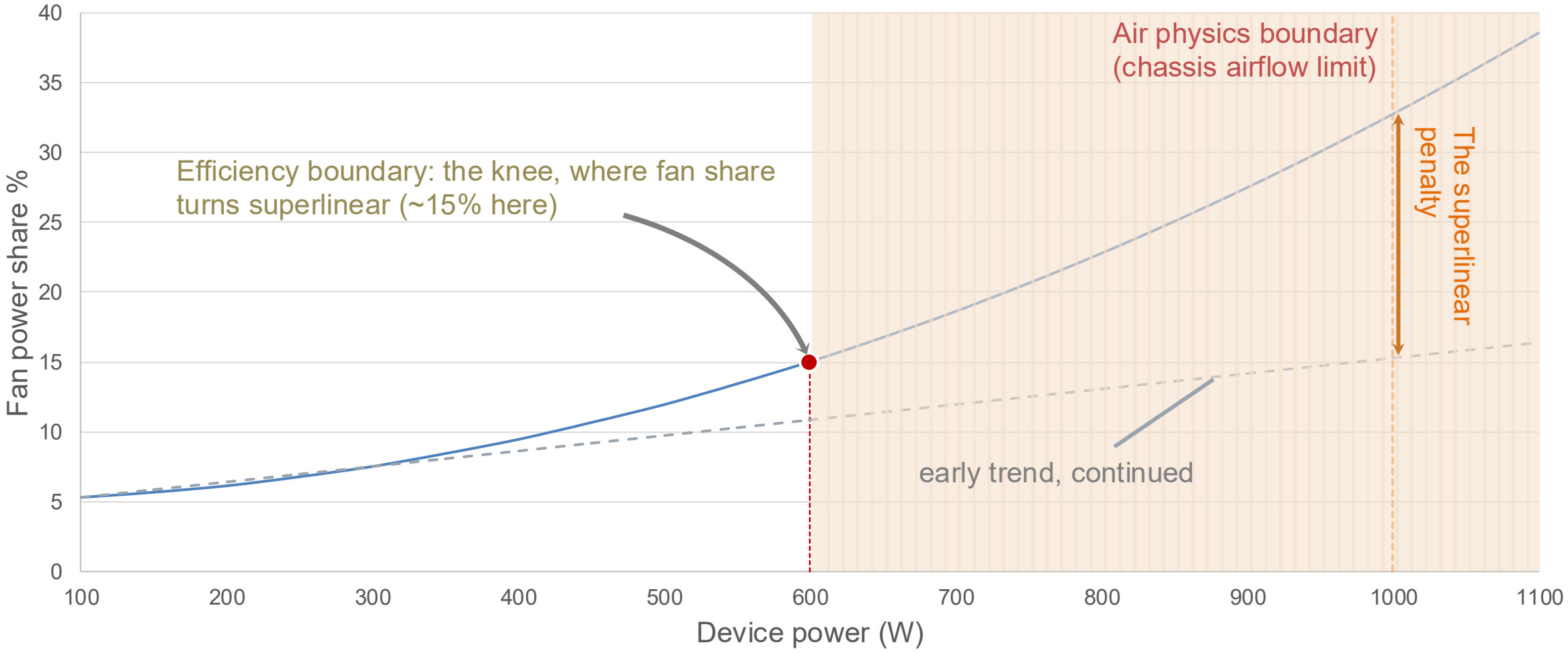
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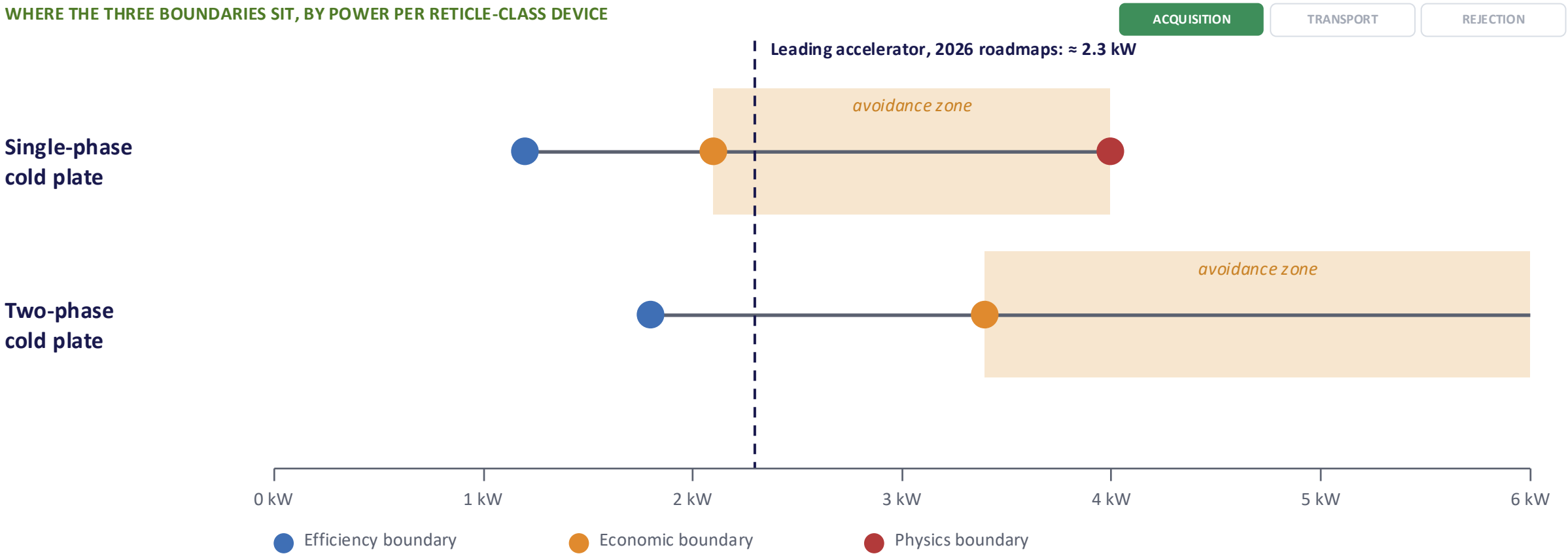
Air's efficiency boundary

COOLING OVERHEAD CLIMBS WITH DEVICE POWER



Cold plate is entering its avoidance zone

WHERE THE THREE BOUNDARIES SIT, BY POWER PER RETICLE-CLASS DEVICE

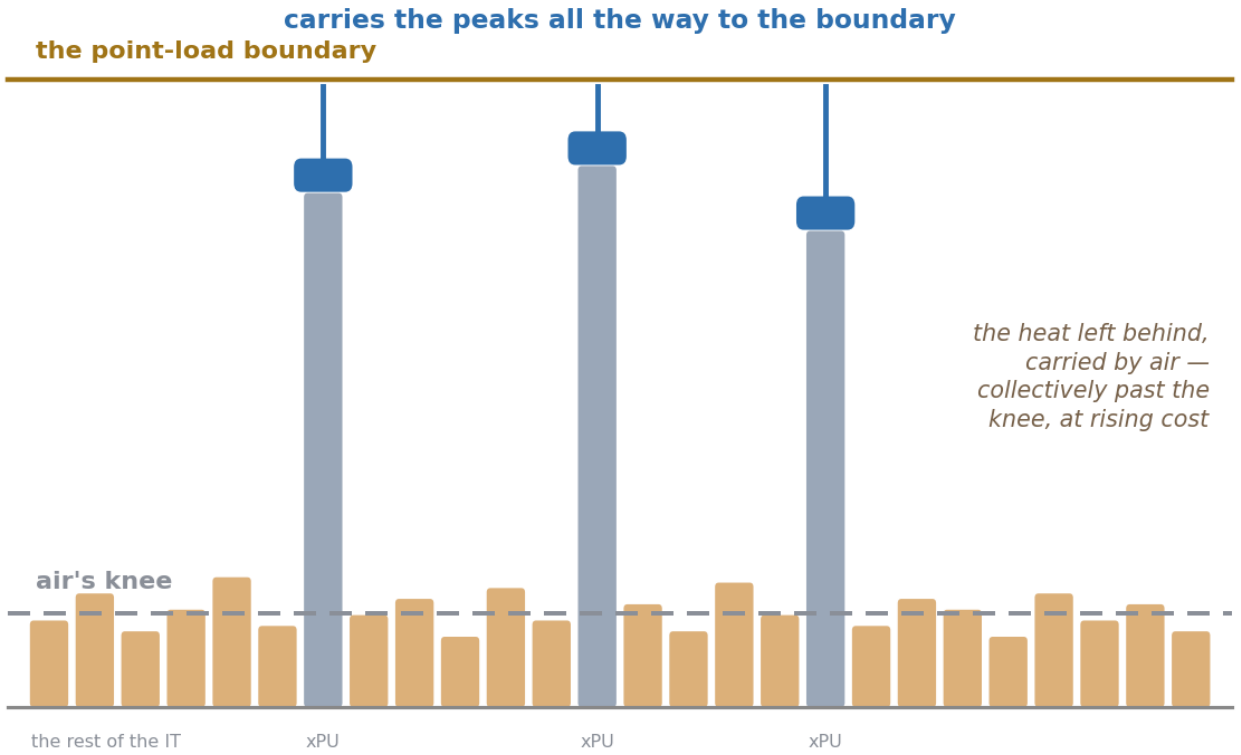


Still possible, no longer sensible. The longer the stretch, the larger the bill.

Source: Thermal Boundaries in AI Infrastructure, an OCP whitepaper from Promersion, Oracle, Avayla and Meta. CC BY-SA 4.0. Accelerator marker: Promersion, from the paper's chart set.

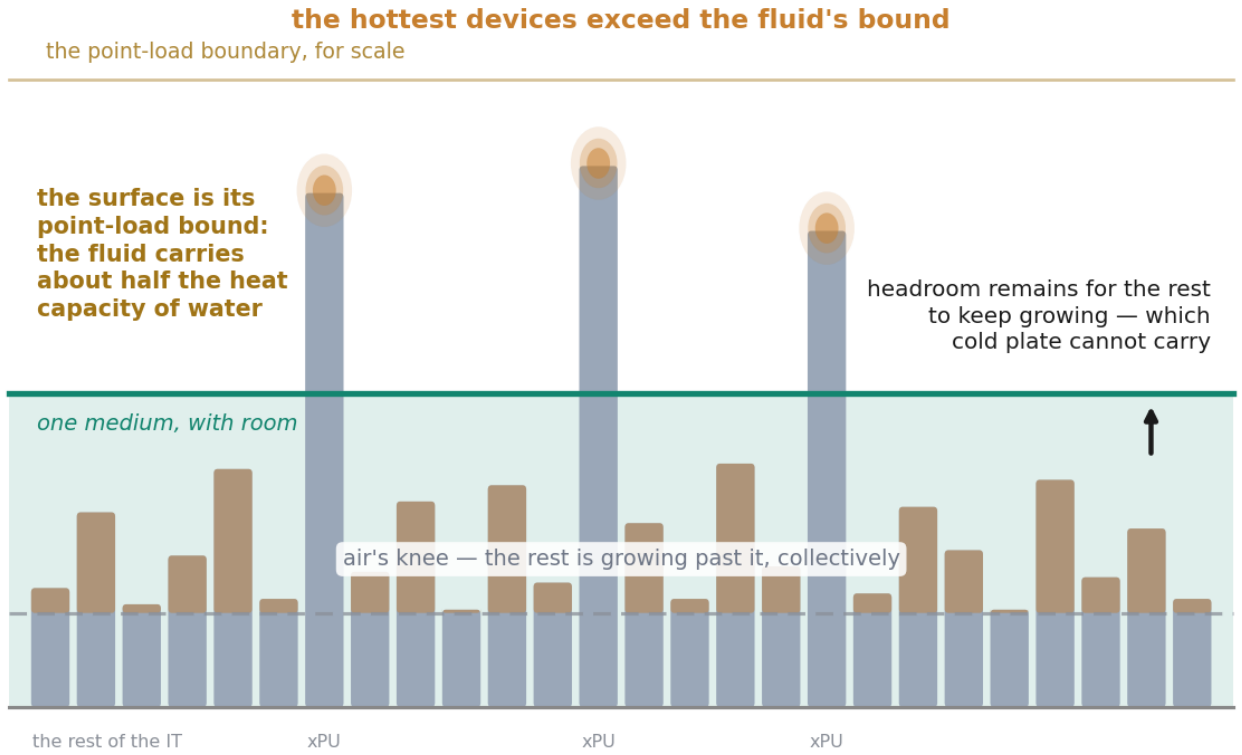
Same heat, two different jobs

A handful of extreme hotspots and a large distributed load – each method owns the boundary the other cannot reach



COLD PLATE

a surface method: the full point-load boundary, none of the rest



SINGLE-PHASE IMMERSION

a holistic method: a lower point-load boundary, all of the rest — with headroom

White Paper Spotlight: Thermal Boundaries in AI Infrastructure

Matching cooling technologies to compute through the power inflection — OCP OSAI Strategic Initiative / Cooling Environments, Aug 2026

Scan to download

Three boundaries — efficiency, economics, physics — bound every cooling method; the “avoidance zone” between them explains why transitions are delayed

Least-disruption law: a new method is adopted only when the old one can no longer do the job — not simply because it's better

≈4,000 W

projected physics boundary per reticle for single-phase cold plate on current silicon roadmaps

1 **Efficiency boundary**

cooling cost eats into output

2 **Economic boundary**

“avoidance zone” begins here

3 **Physics boundary**

method can no longer work

Conclusion: no single technology wins — the industry needs an interoperable, multi-technology toolkit matched to the heat, site, and moment.

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Liquid Cooling Bazaar

Steve Mills *Technical Lead, AI hardware & data center design, Meta*

Rolf Brink *CEO, Promersion*

With all OCP Cooling Environments volunteer leaders

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Made possible by:

ExxonMobil

Introductions: Cooling Environments

Role	Lead	Co-lead
CE Top Project	John Fernandes (Meta)	Sean Sivapalan (NVIDIA)
OCP Steering Committee	Steve Mills (Meta)	

Cooling Environments

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Immersion Project leadership

Body	Lead	Co-lead
Immersion Project	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)
Technical committees		
Fluids Committee	Kris Fletcher (Independent)	Spencer Kerns (Chevron Phillips Chemical)
ITE Committee	Austin Hipes (Unicom Engineering)	*Pending*
Reliability Committee	Samantha Yates (Intel)	Brian Kinkade (Fuchs)
Solutions Committee	Amy Short (Denvr Dataworks)	Kevin Gero (Murata Power Solutions), Andy Young (Asperitas)
Support teams		
Community Enablement	Gemma Reeves (Alfa Laval)	
Community Outreach	Allison Boen (Alcatex)	Rachel Bielstein (Baltimore Aircoil Company)
Industry Liaison	Kelley Mullick (Avayla)	Maryam Mohagheghi (HF Sinclair)
OCP Projects Liaison	*OPEN*	*OPEN*
Immersion Challenges	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



Reliability Committee

Solutions Committee

Challenges

Industry Liaison Team

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Introductions: Immersion workstreams

Workstream	Lead	Co-lead
Fluids: Fluid Cleaning Guidelines	Roma Surís (Submer)	JanElsa Carty (Shell)
Fluids: Fluid Lifecycle Management	Alex McManis (Eneos)	*OPEN*
Fluids: Oxidation Methodology	Spencer Kerns (Chevron Phillips Chemical)	Vanja Boyd (ExxonMobil)
Fluids: Specifications	Kris Fletcher (Independent)	Peter Cooper (Promersion)
ITE: Advanced Cooling Techniques	Andy Richenderfer (Lubrizol)	Florian Hudelmaier (Wieland)
ITE: Design Guidelines for ITE	Austin Hipes (Unicom Engineering)	Peter Liu (Independent)
ITE: Signal Integrity	Tina Bao (TE Connectivity)	Kai Wang (Intel)
Reliability: Component Compatibility	Beau Van Vaerenbergh (Oleon)	Brian Kinkade (Fuchs)
Reliability: Material Compatibility	Bobby Glidwell (Magnalytix)	Punith Shivaprasad (Shell)
Reliability: Server Thermochemical Reliability	Samantha Yates (Intel)	Betsy Cossette (ExxonMobil)
Solutions: FMEA	Nicholas Beardsley (GRCooling)	Khaled Morsy (Bureau Veritas)
Solutions: Hardware Management	Mick Jones (Vertiv)	Closed
Solutions: Immersion Requirements	Amy Short (Denvr Dataworks)	Peter Cooper (Promersion)
Solutions: Power Distribution	Oriol Chavanel (Submer)	Kevin Gero (Murata Power Solutions)
Solutions: TCO	Andy Young (Asperitas)	Eduard Roytman (Microsoft)

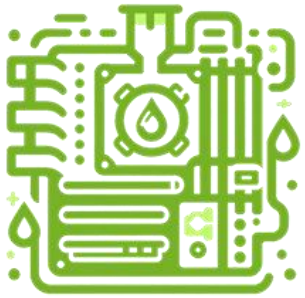
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Immersion mailing lists: Fluids & ITE

Fluids-Cleaning Guidelines

Fluids-Lifecycle Management

Fluids-Oxidation Methodology



ITE-Advanced Cooling Techniques

ITE-Design Guidelines

ITE-Signal Integrity

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Immersion mailing lists: Solutions



Solutions-FMEA

Solutions-Hardware Management

Solutions-Immersion Requirements

Solutions-Power Distribution

Solutions-TCO

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Immersion mailing lists: Reliability

Component Compatibility



Material Compatibility

Thermochemical Reliability

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Door Heat Exchanger Project

	Lead	Co-lead
Door Heat Exchanger	Jabari George (JMGE)	Martin Doerrich (Rittal GmbH)
Workstreams		
Aluminum Heat Exchanger Integration in Data Centers	Lionel Faure (Valeo)	Mohamad Hynano (OVHCloud)
Advancing AALC Systems with Sidecar Cooling Solutions	Rajesh Kasukurthy (AMD)	
Door HX Interfaces for ORV3	Juan Carlos Cacho Alonso (Rittal GmbH)	
TCS Flow Control	Andres Parraga Coleman (Grundfos)	

Door HX Project

Mailing List

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Heat Reuse Project

	Lead	Co-lead
Heat Reuse	Jaime Comella (AQ Compute)	Bharath Ramakrishnan (Microsoft)
Workstreams		
Reference Designs	David Sickinger (NREL)	Mark Smith (Alfa Laval)
Economics	Jack Kolar (Dataquarium)	Peter Terenius (Uppsala University), Gemma Reeves (Alfa Laval)
Policies	David Gardiner (DGA)	Otto Van Geet (NREL)

Heat Reuse Wiki

Mailing List

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Cold Plate Project

	Lead	Co-lead
Cold Plate	Emily Clark (Dell)	Berhanu Wondimu (Intel)
Workstreams		
Coolant Fluids	Philip Yu (Veolia)	Keegan Yaroch (DOW), Lilach Butchmits (Zutacore)
UQD/UQDB Specification Rev. 2.0	Elizabeth Langer (CPC)	Travis Gaskill (NVIDIA)
Fluid Velocity	Cheng Chen (Meta)	Harsha Bojja (Microsoft)
BMQC (CLA)	Vijay Mohan (Meta)	Glenn Charest (Meta)
PBMC (CLA)	Vijay Mohan (Meta)	Glenn Charest, John Fernandes (Meta)

Mailing List

Cold Plate Subproject

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: CDU Project (formerly ACF)

	Co-leads	Co-leads
CDU	John Menoche (Vertiv), Hussam Kabbani (Google)	Matt Koukl (AEI), Pardeep Shahi (NVIDIA)

CDU Subproject

Everything you always wanted to know about liquid cooling, but were afraid to ask!

The floor is yours

EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT LIQUID COOLING, BUT WERE AFRAID TO ASK!

Any question

Cold plate, immersion, door HX, CDU, heat reuse, fluids, materials, telemetry and everything in between.

The front rows answer

Project and workstream leaders take the mic for their own area.

Bring the hard ones

Open problems are welcome. If nobody has solved it yet, we will say so.

You set the agenda

What we struggle to answer shows where the gaps are, and feeds the next cycle of work.

Ask anything. Every question tells us where the next cycle of work should go.



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https://dcoffsiteevents.com/forever-fluid-ocp

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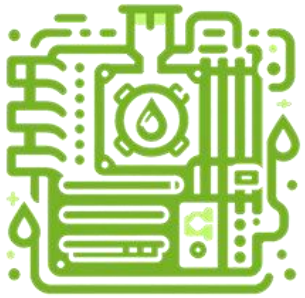
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Fluids-Cleaning Guidelines

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Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



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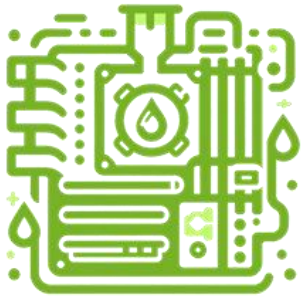
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Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



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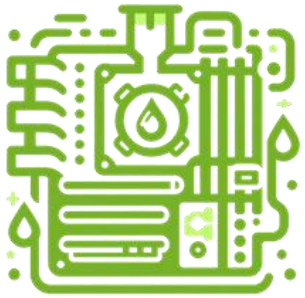
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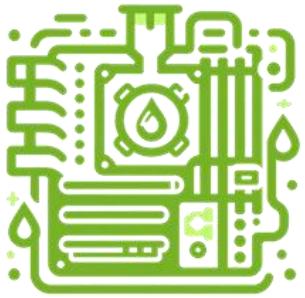
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OCP Projects Liaison	*OPEN*	*OPEN*
Immersion Challenges	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)

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Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



Reliability Committee

Solutions Committee

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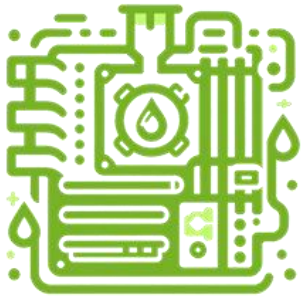
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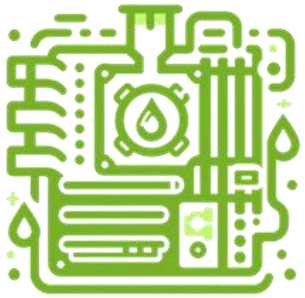
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Immersion Project

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ITE Committee



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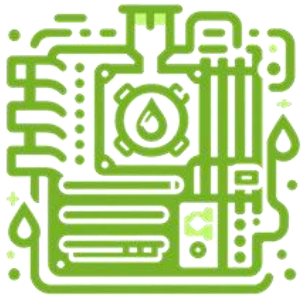
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Door HX Project

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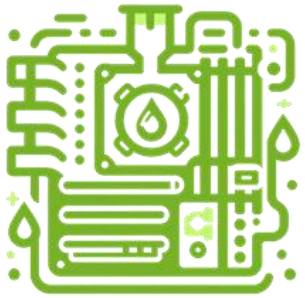
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"LIVE during OCP"

OCP GLOBAL SUMMIT | 2026

Scaling Innovation for the AI Era.

Introductions: Cooling Environments

Role	Lead	Co-lead
CE Top Project	John Fernandes (Meta)	Sean Sivapalan (NVIDIA)
OCP Steering Committee	Steve Mills (Meta)	

Cooling Environments

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Immersion Project leadership

Body	Lead	Co-lead
Immersion Project	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)
Technical committees		
Fluids Committee	Kris Fletcher (Independent)	Spencer Kerns (Chevron Phillips Chemical)
ITE Committee	Austin Hipes (Unicom Engineering)	*Pending*
Reliability Committee	Samantha Yates (Intel)	Brian Kinkade (Fuchs)
Solutions Committee	Amy Short (Denvr Dataworks)	Kevin Gero (Murata Power Solutions), Andy Young (Asperitas)
Support teams		
Community Enablement	Gemma Reeves (Alfa Laval)	
Community Outreach	Allison Boen (Alcatex)	Rachel Bielstein (Baltimore Aircoil Company)
Industry Liaison	Kelley Mullick (Avayla)	Maryam Mohagheghi (HF Sinclair)
OCP Projects Liaison	*OPEN*	*OPEN*
Immersion Challenges	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)

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Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



Reliability Committee

Solutions Committee

Challenges

Industry Liaison Team

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Introductions: Immersion workstreams

Workstream	Lead	Co-lead
Fluids: Fluid Cleaning Guidelines	Roma Surís (Submer)	JanElsa Carty (Shell)
Fluids: Fluid Lifecycle Management	Alex McManis (Eneos)	*OPEN*
Fluids: Oxidation Methodology	Spencer Kerns (Chevron Phillips Chemical)	Vanja Boyd (ExxonMobil)
Fluids: Specifications	Kris Fletcher (Independent)	Peter Cooper (Promersion)
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ITE: Signal Integrity	Tina Bao (TE Connectivity)	Kai Wang (Intel)
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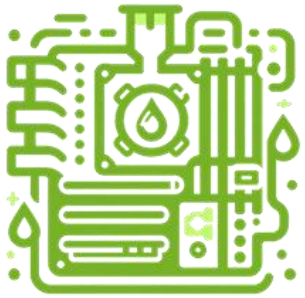
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Fluids-Cleaning Guidelines

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Fluids-Oxidation Methodology



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Immersion mailing lists: Solutions



Solutions-FMEA

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Component Compatibility



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Door HX Project

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Immersion Project

Fluids Committee

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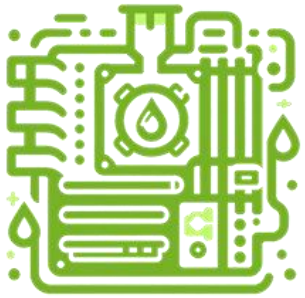
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Immersion Project

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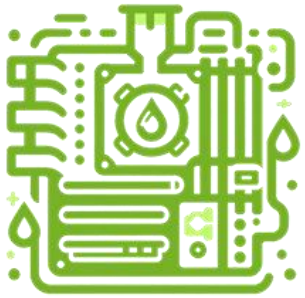
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Door HX Project

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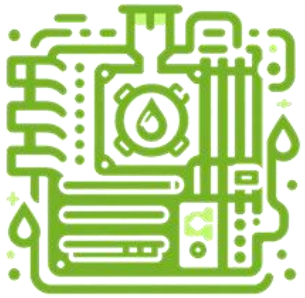
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Cold Plate Subproject

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Scaling Innovation for the AI Era.

Introductions: Cooling Environments

Role	Lead	Co-lead
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OCP Projects Liaison	*OPEN*	*OPEN*
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Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



Reliability Committee

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Challenges

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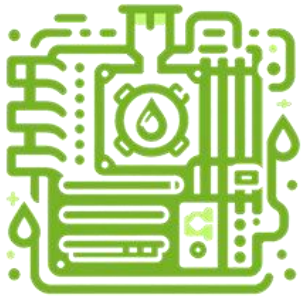
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Door HX Project

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Immersion Project

Fluids Committee

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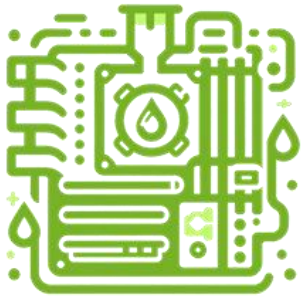
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Immersion Project

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ITE Committee



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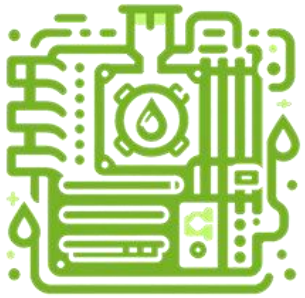
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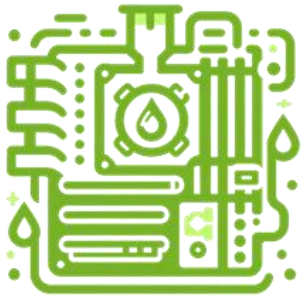
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Heat Reuse	Jaime Comella (AQ Compute)	Bharath Ramakrishnan (Microsoft)
Workstreams		
Reference Designs	David Sickinger (NREL)	Mark Smith (Alfa Laval)
Economics	Jack Kolar (Dataquarium)	Peter Terenius (Uppsala University), Gemma Reeves (Alfa Laval)
Policies	David Gardiner (DGA)	Otto Van Geet (NREL)

Heat Reuse Wiki

Mailing List

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Cold Plate Project

	Lead	Co-lead
Cold Plate	Emily Clark (Dell)	Berhanu Wondimu (Intel)
Workstreams		
Coolant Fluids	Philip Yu (Veolia)	Keegan Yaroch (DOW), Lilach Butchmits (Zutacore)
UQD/UQDB Specification Rev. 2.0	Elizabeth Langer (CPC)	Travis Gaskill (NVIDIA)
Fluid Velocity	Cheng Chen (Meta)	Harsha Bojja (Microsoft)
BMQC (CLA)	Vijay Mohan (Meta)	Glenn Charest (Meta)
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Cold Plate Subproject

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Introductions: CDU Project (formerly ACF)

	Co-leads	Co-leads
CDU	John Menoche (Vertiv), Hussam Kabbani (Google)	Matt Koukl (AEI), Pardeep Shahi (NVIDIA)

CDU Subproject

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Scaling Innovation for the AI Era.

Introductions: Cooling Environments

Role	Lead	Co-lead
CE Top Project	John Fernandes (Meta)	Sean Sivapalan (NVIDIA)
OCP Steering Committee	Steve Mills (Meta)	

Cooling Environments

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Immersion Project leadership

Body	Lead	Co-lead
Immersion Project	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)
Technical committees		
Fluids Committee	Kris Fletcher (Independent)	Spencer Kerns (Chevron Phillips Chemical)
ITE Committee	Austin Hipes (Unicom Engineering)	*Pending*
Reliability Committee	Samantha Yates (Intel)	Brian Kinkade (Fuchs)
Solutions Committee	Amy Short (Denvr Dataworks)	Kevin Gero (Murata Power Solutions), Andy Young (Asperitas)
Support teams		
Community Enablement	Gemma Reeves (Alfa Laval)	
Community Outreach	Allison Boen (Alcatex)	Rachel Bielstein (Baltimore Aircoil Company)
Industry Liaison	Kelley Mullick (Avayla)	Maryam Mohagheghi (HF Sinclair)
OCP Projects Liaison	*OPEN*	*OPEN*
Immersion Challenges	Rolf Brink (Promersion)	Jessica Gullbrand (Eaton)

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Immersion Project mailing lists

Immersion Project

Fluids Committee

ITE Committee



Reliability Committee

Solutions Committee

Challenges

Industry Liaison Team

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Introductions: Immersion workstreams

Workstream	Lead	Co-lead
Fluids: Fluid Cleaning Guidelines	Roma Surís (Submer)	JanElsa Carty (Shell)
Fluids: Fluid Lifecycle Management	Alex McManis (Eneos)	*OPEN*
Fluids: Oxidation Methodology	Spencer Kerns (Chevron Phillips Chemical)	Vanja Boyd (ExxonMobil)
Fluids: Specifications	Kris Fletcher (Independent)	Peter Cooper (Promersion)
ITE: Advanced Cooling Techniques	Andy Richenderfer (Lubrizol)	Florian Hudelmaier (Wieland)
ITE: Design Guidelines for ITE	Austin Hipes (Unicom Engineering)	Peter Liu (Independent)
ITE: Signal Integrity	Tina Bao (TE Connectivity)	Kai Wang (Intel)
Reliability: Component Compatibility	Beau Van Vaerenbergh (Oleon)	Brian Kinkade (Fuchs)
Reliability: Material Compatibility	Bobby Glidwell (Magnalytix)	Punith Shivaprasad (Shell)
Reliability: Server Thermochemical Reliability	Samantha Yates (Intel)	Betsy Cossette (ExxonMobil)
Solutions: FMEA	Nicholas Beardsley (GRCooling)	Khaled Morsy (Bureau Veritas)
Solutions: Hardware Management	Mick Jones (Vertiv)	Closed
Solutions: Immersion Requirements	Amy Short (Denvr Dataworks)	Peter Cooper (Promersion)
Solutions: Power Distribution	Oriol Chavanel (Submer)	Kevin Gero (Murata Power Solutions)
Solutions: TCO	Andy Young (Asperitas)	Eduard Roytman (Microsoft)

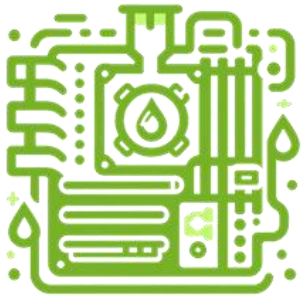
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Immersion mailing lists: Fluids & ITE

Fluids-Cleaning Guidelines

Fluids-Lifecycle Management

Fluids-Oxidation Methodology



ITE-Advanced Cooling Techniques

ITE-Design Guidelines

ITE-Signal Integrity

Everything you always wanted to know about liquid cooling, but were afraid to ask!

Immersion mailing lists: Solutions



Solutions-FMEA

Solutions-Hardware Management

Solutions-Immersion Requirements

Solutions-Power Distribution

Solutions-TCO

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Immersion mailing lists: Reliability

Component Compatibility



Material Compatibility

Thermochemical Reliability

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Introductions: Door Heat Exchanger Project

	Lead	Co-lead
Door Heat Exchanger	Jabari George (JMGE)	Martin Doerrich (Rittal GmbH)
Workstreams		
Aluminum Heat Exchanger Integration in Data Centers	Lionel Faure (Valeo)	Mohamad Hynano (OVHCloud)
Advancing AALC Systems with Sidecar Cooling Solutions	Rajesh Kasukurthy (AMD)	
Door HX Interfaces for ORV3	Juan Carlos Cacho Alonso (Rittal GmbH)	
TCS Flow Control	Andres Parraga Coleman (Grundfos)	

Door HX Project

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Open Discussion

