

nLighten Water Policy.

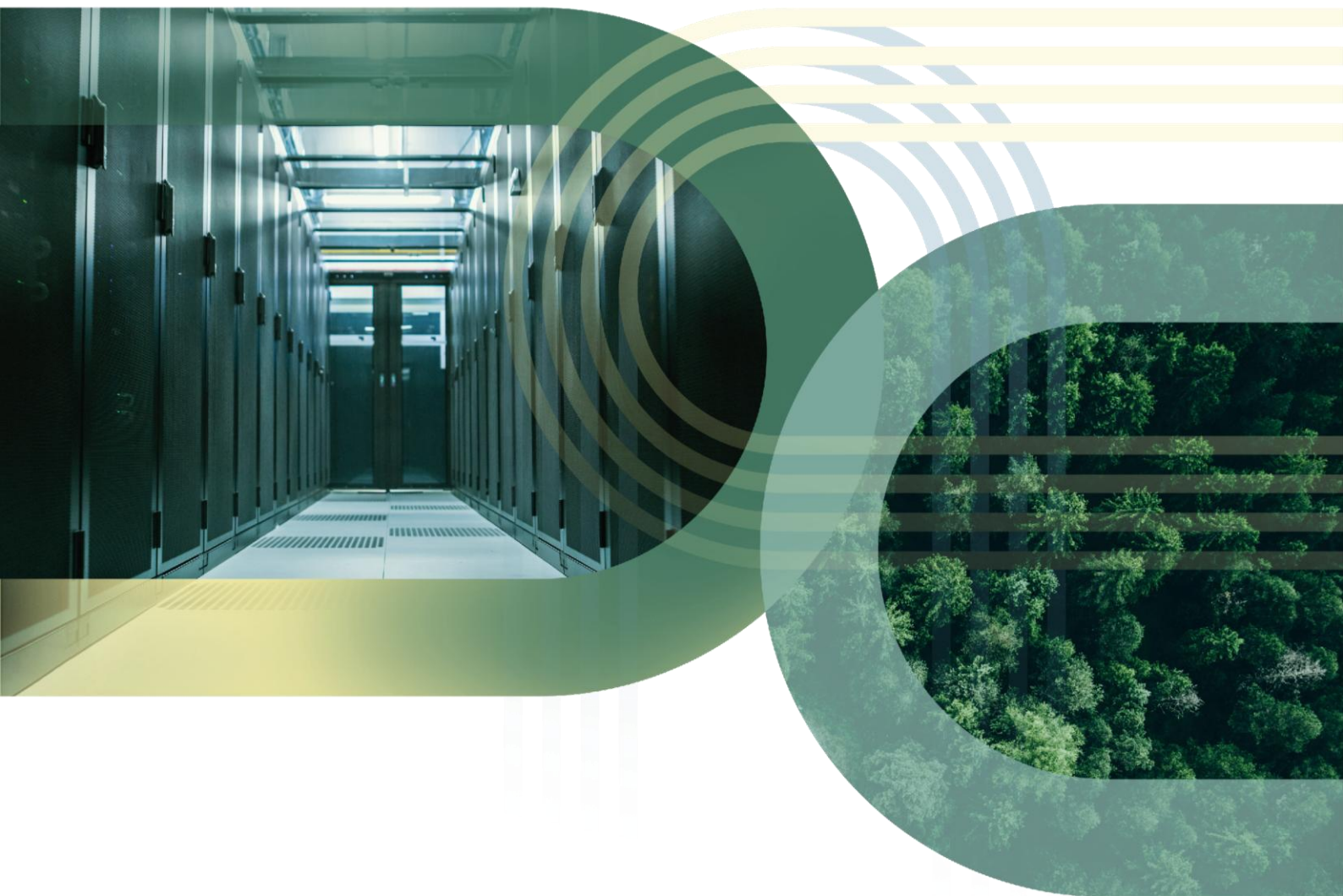


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Version History

Version No.	Date (DD/MM/YYYY)	Change Description	Author
1.0	19/03/2026	First version	VP Energy Operations & Sustainability

PURPOSE

This document establishes nLighten’s Water Policy framework for data-centre operations. It provides a common set of principles to ensure consistent application across all sites, alignment with nLighten’s Sustainability Policy, and compliance with applicable regulatory requirements.

Industry Context

The rapid expansion of data centres has led to a significant increase in water demand, primarily driven by cooling requirements. As digitalization, cloud computing, and artificial intelligence continue to scale, global water withdrawals associated with data-centre operations are rising, intensifying pressure on water systems.

nLighten data centres only look at water-consumptive cooling options in areas of low water stress, where water can be used sustainably. This means using limited quantities of water efficiently, and from sustainable, non-potable sources wherever possible.

OWNERSHIP

The Board of Directors has overall oversight of this Water Policy as part of its ESG governance responsibilities. The Board approves the policy, receives periodic compliance reports, and endorses material revisions.

The Chief Technology Officer (CTO) is accountable for the policy. The CTO owns the outcome of water management across all nLighten sites, approves material changes to the policy or its principles, and reports to the Board on compliance status at least annually.

The VP Energy Operations & Sustainability (VP EOS) is responsible for the implementation of this policy. The VP EOS develops and maintains the Water Procedures document that operationalises this policy, oversees site-level compliance, tracks transitional provisions, and escalates non-compliance or deviation requests to the CTO.

Role	Individual / Body	Responsibilities
Oversight	Board of Directors	Approves policy; receives compliance reports; endorses material revisions
Accountable	CTO	Owns policy outcome across all sites Approves material changes and deviations Reports to Board on compliance
Responsible	VP Energy Operations & Sustainability	Implements policy; maintains Water Procedures Oversees site-level compliance Tracks transitional provisions and escalates Prepares review and recommends changes
Supporting	Master-planning, Site Ops, Compliance / Legal	Execute procedures as defined in the Water Procedures document per the RACI matrix

Table 1 — Governance summary

SCOPE

The policy applies to all nLighten data-centre sites, irrespective of location. Given that water regulation, permitting processes, and environmental constraints vary significantly by country and region, the policy is designed as a common framework to be implemented in conjunction with local mandatory regulatory requirements. Detailed implementation guidance is contained in the Water Procedures document.

Policy and Procedures Hierarchy

This Water Policy sets out nLighten's commitments, principles, and governance framework. It is supported by a Water Procedures document that contains the detailed operational methodologies, decision pathways, assessment tools, reporting templates, and worked examples needed to implement the policy at site level.

The relationship between the two documents is as follows:

- The Water Policy defines what nLighten commits to and why. Changes to the policy require CTO approval and Board endorsement.
- The Water Procedures document is an internal operational document. It defines how the policy is implemented. The VP EOS is responsible for maintaining and updating the procedures, subject to CTO oversight. Changes to procedures that do not alter policy principles may be made by the VP EOS.
- In the event of any conflict between the two documents, this Water Policy takes precedence.

Review Cycle

This policy is reviewed every eighteen months or earlier if triggered by any of the following: material changes to EU or national water regulation; significant changes to nLighten's operational footprint; technological developments that materially affect water management options; or findings from site-level compliance reviews.

The VP EOS prepares the review and recommends any changes. The CTO approves revisions and presents the review outcome to the Board. The review record, including any changes made and the rationale, is documented and retained.

POLICY

1. Guiding Principles

The following principles establish the foundation for all water-related decisions at nLighten. They are organised in a two-tier hierarchy: Tier 1 principles set hard constraints that cannot be overridden; Tier 2 principles guide optimisation within those constraints. Transitional provisions (Section 4) acknowledge current infrastructure limitations and define time-bound conditions under which the long-term targets may be approached progressively.

1.1. Tier 1: Water-Stress Primacy (Hard Constraints)

Tier 1 principles are non-negotiable. They define the ceiling for water use at every site and cannot be overridden by energy, carbon, or cost considerations.

P1. Local Climate Conditions and Water Stress are the Primary Governing Constraint

The climate conditions—defined through the local Cooling Degree Days classification— and water-stress¹ classification of a site’s location—determined through the WRI Aqueduct Water Risk Atlas—set limits on permissible water volumes through the WUEmax hard ceiling². These limits apply regardless of grid carbon intensity, electricity cost, or any other factor.

Rationale: A litre of water consumed in a cooling tower in a drought-affected region is not equivalent to a litre evaporated at a power plant hundreds of kilometres away. Local scarcity has immediate consequences for ecosystems, agriculture, and communities that cannot be offset by carbon accounting. Furthermore, low-carbon grids (e.g. nuclear-heavy France) often have high water-consumption factors precisely because the generation technology itself is water-intensive—creating a circular problem if energy-water trade-offs are allowed to override local stress assessments.

P2. Non-consumptive use of water

nLighten data centres do not plan to use water for cooling as a default. Every new site and every design revision start from the assumption that cooling will be achieved without consumptive water.

P3. Water as Last Resort

Water may only be introduced when a waterless design cannot meet operational requirements, and only after a documented justification has been reviewed and approved by the CTO (on the recommendation of the VP EOS). If evaporative cooling is chosen, preference will be given to a hybrid system and efficient water treatment will also be applied so that the amount of water consumed and discharged will be minimal. The hard ceiling established as part of P1 is still to be met.

P4. Water Sources and Long-Term Target

For the use of water sources operational and cost considerations need to be considered along with the local water-stress conditions:

Water Source	Advantages	Challenges / Limitations
Stormwater and rain-water harvesting	Reduces reliance on potable municipal water.	Highly dependent on seasonal rainfall. During periods of water scarcity (e.g., summer), volumes collected may be insufficient to support cooling demand. Requires large storage infrastructure and treatment systems, increasing CAPEX and operational complexity. Space constraints may limit feasibility.

¹ Regulation of EU will be monitored and definitions and methodology included in the policy will be adapted accordingly.

² Climate Condition and Water-Stress are identified as key parameter in WUEmax to account for site-specific water availability as per White Paper on DC responsible use of water by Climate Neutral Data Centre Pact (CNDPCP).

Municipal reclaimed or industrial reclaimed water	Enables reuse of treated wastewater and reduces pressure on freshwater resources. Often provides a relatively stable supply in urban or industrial areas.	Cooling systems must be designed to handle reclaimed water quality (higher mineral content, biological load). Requires adapted pumps, heat exchangers, filtration and treatment systems, increasing CAPEX and OPEX compared with conventional potable water systems.
Brackish or seawater (closed-loop or permitted open-loop heat exchange)	Allows large-scale heat rejection without using freshwater resources. Particularly suitable for coastal locations where seawater is readily available. Can significantly reduce potable water demand.	Requires corrosion-resistant piping, pumps, and heat exchangers. Saltwater cannot typically circulate in the internal cooling loop due to corrosion risks, requiring intermediate heat exchange systems. Infrastructure costs can be high and environmental permits may be required for marine intake and discharge.
Surface freshwater (non-consumptive closed-loop configurations)	Minimal water consumption because mainly used as a thermal exchange medium rather than evaporated. Water replacement is infrequent (potentially once every 10–15 years in closed-loop systems).	Requires high-quality water and often additives to maintain system stability. Permitting may be required for abstraction or thermal discharge. Environmental constraints may limit applicability depending on local ecosystems.
Groundwater	Provides relatively stable temperature conditions that can improve cooling efficiency in suitable hydrogeological conditions.	Groundwater abstraction should generally be avoided unless regulators confirm that no environmental impact occurs and reinjection is feasible. Over-abstraction can affect aquifers and ecosystems. Requires permits, monitoring, and ongoing regulatory compliance.

Table 2 — Water sources

When many facilities independently develop alternative water supply systems (e.g., groundwater abstraction, surface water use, rainwater harvesting), the cumulative infrastructure requirements can become complex and inefficient. Multiple standalone catchment and treatment systems may increase operational costs, maintenance obligations, and regulatory oversight. In many contexts, centralized water supply systems—particularly municipal reclaimed water from wastewater treatment plants (WWTPs)—may provide a more efficient, scalable, and sustainable solution.

Transitional provisions for potable water are set out in Section 4.

P5. No Dump-and-Discharge

Once-through cooling to drains or surface waters is prohibited. Any design whose normal operation requires continuous consumptive water discharge is not acceptable. Non-consumptive heat exchange with natural waters (e.g. river-loop district-heating feed) is preferred where permitted.

P6. Displacement Test

Before any water source is approved, the site must assess whether its use would deprive other users—agriculture, domestic supply, ecosystems—of water they depend on. Where displacement risk exists, the water source is not permissible. The methodology for conducting displacement tests is defined in the Water Procedures document.

1.2. Tier 2: Net Benefit (Secondary Optimisation)

Tier 2 principles guide decision-making within the hard limits set by Tier 1. They help choose between designs that all satisfy the Tier 1 constraints, but they can never override a Tier 1 restriction.

P7. Energy–Water Trade-off

Water savings must not be pursued at disproportionate energy cost, and energy savings must not be pursued at disproportionate water cost. The Water–Power Check quantifies this relationship:

$$\text{Total water (L/kWh-IT)} = \text{WUE} + \text{PUE} \times \text{WCF(grid)}$$

Critical limitation: This equation is a Tier 2 tool. It helps compare designs that have already passed the Tier 1 gate. It must never be used to justify water use in a water-stressed location. The methodology is detailed in the Water Procedures document.

P8. Transparency and Disclosure

Every site must measure, record, and report its water consumption. Mandatory WUE Category 1 reporting follows the CEN-CENELEC EN 50600-4-9 methodology where applicable. All sites—including those not subject to mandatory disclosure—report WUE_{max} internally to the VP EOS as defined in Water Procedures.

2. Current State of Non-Potable Water Infrastructure in Europe

In setting this policy it is important to be honest about the current state of infrastructure and the feasibility in the use of water sources listed in P4. Across the European markets where nLighten operates, reclaimed, recycled, and other non-potable water supplies are not available at scale for industrial applications:

- EU Regulation 2020/741 establishes minimum quality standards for water reuse, but its scope is limited to agricultural irrigation. There is no EU-wide framework for industrial reuse, including data-centre cooling.
- France has the most advanced ambitions but reclaimed-water projects are overwhelmingly agricultural. Securing a non-potable industrial supply requires proximity to a wastewater treatment plant with tertiary treatment, plus bespoke permitting—typically a multi-year process.
- Germany treats water reuse cautiously even for agriculture; industrial reuse infrastructure is essentially non-existent outside pilot projects.
- The Netherlands and Belgium have excellent wastewater treatment but limited reuse distribution networks oriented toward industrial users.
- Spain leads Europe in agricultural water reuse but industrial connections remain confined to specific industrial zones.
- The UK and Switzerland have virtually no reclaimed-water distribution infrastructure for industrial users.
- Even in the United States, where hyperscalers have invested heavily in co-location with wastewater treatment plants, alternative water sources contribute less than 5% of total data-centre water use (LBNL, 2024).

In practical terms, the only water supply realistically and reliably available at most nLighten sites today is potable mains water. The non-potable categories listed at P4 are not a description of what can be procured today.

3. Transitional Regime for Potable Water

Acknowledging this reality, nLighten adopts the following transitional regime. This is not an open-ended relaxation; it is a time-bound, conditional allowance with a built-in ratchet toward the long-term target. Potable water may be used for cooling only when all of the following conditions are met:

- A non-consumptive water design has been evaluated and documented as insufficient to meet operational requirements at the site (P2, P3).

- No non-potable source (reclaimed, harvested, brackish/seawater) is available or feasibly connectable within the site's planning horizon.
- Consumptive use of water is limited to peak-time assist only – never year-round baseline cooling.
- The site's WUE does not exceed the site specific WUE_{max} ceiling, defined by climatic region, water-stress conditions and water type used. This is a hard ceiling, not a target.
- All water use is metered and approved by the VP EOS.
- The displacement test (P6) has been passed.
- A documented phase-out plan is in place, identifying the steps, investments, and timeline for transitioning to a non-potable source or eliminating water use entirely.

In extremely-high stress zones (>80%) the site must demonstrate that no alternative—including relocating the cooling load or accepting higher PUE—is viable before potable water is approved.

4. Biennial Non-Potable Feasibility Review

At each biennial site review, every site currently using potable water under the transitional regime must reassess non-potable availability, engage with local utilities, update phase-out plans, and initiate a switch within 12 months if a feasible non-potable source has become available. The VP EOS is accountable for tracking these reviews and escalating sites where the transitional allowance has been in place for more than two review cycles (four years) without a credible path to phase-out.

5. Implementation Overview

The detailed implementation of this policy is contained in the Water Procedures document, maintained by the VP EOS. The procedures cover the following areas:

5.1. Decision Pathway

Every water-related decision follows a structured six-step pathway that enforces the two-tier hierarchy. Steps 1–4 are Tier 1 gates (regulatory compliance, water-risk assessment, displacement test, source determination). Steps 5–6 involve Tier 2 optimisation (technology selection, ongoing monitoring). The full pathway, including application triggers for new and existing sites, is defined in the Water Procedures document.

5.2. Accountability

A RACI matrix assigns clear responsibilities for each activity in the decision pathway. Each activity has exactly one accountable owner. The RACI matrix is maintained in the Water Procedures document.

5.3. Regulatory Compliance

Water use at nLighten sites falls under regulatory frameworks governing water abstraction and discharge across European jurisdictions. Country-specific regulatory requirements, competent authorities, and permitting processes are documented in the Water Procedures document and reviewed at least annually by the Compliance / Legal team.

5.4. Reporting

WUE reporting is mandatory under EED transposition in France, Germany, Spain, the Netherlands, and Belgium. All sites—including those not subject to mandatory disclosure—report WUE_{max} internally. The reporting methodology, including the Water–Power Check, is defined in the Water Procedures document.

APPROVED EXCEPTIONS

Compliance with this policy is mandatory for all nLighten data-centre sites. Any deviation from the policy principles must be explicitly justified, documented, recommended by the VP EOS, and approved by the CTO. Deviations may be considered only where required by local constraints or exceptional circumstances and must remain consistent with the policy’s overarching sustainability objectives. A register of active deviations is maintained by the VP EOS and reported to the CTO as part of each review cycle.

ACRONYMS

Acronym	Definition
CTO	Chief Technology Officer
EED	Energy Efficiency Directive (EU)
EOS	Energy Operations and Sustainability (nLighten)
ESG	Environmental, Social, and Governance
LBL	Lawrence Berkeley National Laboratory
PUE	Power Usage Effectiveness
RACI	Responsible, Accountable, Consulted, Informed
VP EOS	Vice President, Energy Operations & Sustainability
WCF	Water Consumption Factor
WRI	World Resources Institute
WUE	Water Usage Effectiveness

Table 3 — Acronyms