

Project OBELISC

Stage One

You said, We did

2026

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Project OBELISC could help us upgrade homes for electrification more quickly as demand for low carbon technologies grows. It could help address several common challenges with domestic electricity supplies, including upgrading existing homes, removing looped supplies at scale, and making new connections for housing simpler and more cost-effective.

Phase One of the project sought to establish its technical and functional requirements. These were developed in consultation with our Stakeholder Review Panel. The table below provides a detailed explanation of how Project OBELISC has been shaped with stakeholder input in Phase One.

Technical Considerations: Sizing

You Said	We did
I want to have enough room so I can easily route cables	Specific requirements added to ensure cabinet has sufficient room. Installers planned to be shown design reviews to assess for themselves
I want enough space so I can easily install all the components	Specific requirements added that "Enclosure should have sufficient space to allow for safe install of all equipment". Installers planned to be shown design reviews to assess for themselves
I want the user components to be separate from the DNO components	Specific requirement added to "Include separate compartments to segregate DNO equipment from the metering and customers owned equipment".
6ft feels way too big	Assembly size requirement adjusted to state "shall fit within a maximum target spatial envelope [1.25m x 0.75 m x 0.5m]. The enclosure should be minimised in size where possible required to ensure compliance"
I don't want the box to be so big that it blocks my driveway	Assembly size requirement adjusted to state "shall fit within a maximum target spatial envelope [1.25m x 0.75 m x 0.5m]. The enclosure should be minimised in size where possible required to ensure compliance"

Technical Considerations: Connections

You Said	We did
I want the install to be 'plug in and play' with existing cables so it's easy to install	OBELISC is planned to connect to existing LV distribution system, and has requirements to ensure ease of install
I want to be able to connect a heat pump, an EV charger and my solar panels	Ability to connect EVs, Heat Pumps, Storage Technologies, Microgeneration via single or 3 phase cables on bidirectional meters has been added to requirements
It needs to be compliant with BS7671 ESQCR 2002	Compliance added to both the functional specification and requirements document. Compliance will be assured during the design review stage
I want to be able to connect a fast / rapid EV charger	Specific requirements have been added to ensure OBELISC is designed to be capable of supplying appropriate voltage and amperage to fast EV chargers and other LCTs

Technical Considerations: Components

You Said	We did
I want an easy to install cable connector	We are engaging with installers throughout to ensure design is suitable
I want an easy to install earthing connection	Functional specifications are written to ensure earthing requirements comply with BS 7671 and 61439
I need three phase protective devices	Functional specifications and requirements document state the need for appropriate protective devices for an OBELISC install on both NGED and customer side
Being able to connect a smart meter is important	Specific requirement to ensure compatibility with smart meters
I need a route for CT clamps	Specific requirements added that "Enclosure should have sufficient space to allow for safe install of all equipment". Installers planned to be shown design reviews to assess for themselves
Components need to be adaptable to climate change	Specific requirements have been added to ensure OBELISC is designed to be resilient to climate change
The unit needs to be robust	Based on steering review panel conversations, specific requirement added to ensure OBELISC cabinet can resist damage to a suitable level in compliance with BS EN 61439-1 (section 8.2)

Technical Considerations: Access

You Said	We did
Customers (and the DNO) should be able to access from one side of both sides	Specific requirements added to ensure Customer equipment will be in separate compartments from DNO and Metering equipment
Customers need the doors to be easy to move	Specific requirements added to ensure OBELISC is accessible to those with differing abilities, according to BS 7000-6:2005
There should be a lockable door	Security standard identified and incorporated into requirements and functional specification to ensure appropriate security
DNOs should be able to access without entering the customers' property	Customer equipment will be in separate compartments from DNO and Metering equipment
I want the interior layout to be easy to understand	Functional specification updated to state layout supports safe inspection. Specific requirements added to ensure components are distinguishable
I want it to be high enough so I can enter it without having to bend down	Specific requirements added to ensure OBELISC is accessible to those with differing abilities, according to BS 7000-6:2005
I want easy-to-use handles	Specific requirements added to ensure OBELISC is accessible to those with differing abilities, according to BS 7000-6:2005
The unit cannot impede general access	OBELISC will be designed to ensure customer access while remaining secure

Technical Considerations: Security

You Said	We did
I don't want people to be able to access / damage the cabinet	Based on SRP input, suitable security and impact resistance standards identified and incorporated into requirements and functional specifications
I don't want unauthorised people to be able to access the cabinet	OBELISC has requirements stating it will be designed to prevent unauthorised access
I don't want any components to be accessed remotely	OBELISC has requirements stating it will be designed to protect internal components from external influences
I don't want someone to be able to access my smart meter	OBELISC has requirements stating it will be designed to protect internal components from external influences
I don't want complex locks	Specific requirement added to ensure design is secure, but specific method will be developed during the design phase

Technical Considerations: Maintenance

You Said	We did
Customers don't want to have to wait in for the maintenance worker	OBELISC will remove the need wait in for NGED maintenance workers positioning the meter cabinet in an accessible location
I want maintenance to be cheap	Maintenance will likely be simpler as OBELISC is outside properties, which could lower costs
I want easy-to-access replacement parts	Suppliers being involved as part of the design stages. Design specifications and functional requirements will be shared with the wider supply chain at project end to allow third party development of parts
I want to be able to access the part of the cabinet that I need to	OBELISC cabinet will be designed to ensure requirements separating customer, DNO and meter equipment is separately accessible

Technical Considerations: Safety and Environment

You Said	We did
I want it to be electrically safe with grounding in case of failure	Specific requirements add to mandate that equipment will be electrically safe, and minimise risk of fire by design
I don't want any sharp edges on the cabinet	Cabinet will be designed to ensure there will be no sharp edges
I want the cabinet to be made from environmentally friendly materials	Designers will consider using Recyclable and low carbon materials where possible and the design process plan will ensure designers suitably assess and capture sustainability decisions
I want the cabinet to be adaptable to climate change	The enclosure will be waterproof, flood resistant and weather resistant
I want the cabinet to be safe from flooding	Cabinet shall be positioned to avoid undue exposure to flooding and standing water
I want OBELISC to have carbon accounting built into the design process	Designers will consider using recyclable materials where possible, and the design process plan will ensure designers suitably assess and capture sustainability decisions
I don't want the cabinet to damage my car in an accident	Based on steering review panel conversations, specific requirement added to ensure OBELISC cabinet can resist damage to a suitable level in compliance with BS EN 61439-1 (section 8.2)

User Requirements

You Said	We did
OBELISC must balance functional requirements and aesthetics	This will be managed throughout the Design stage of the project
DNO compliance is critical to ensuring the unit's success	DNOs will be consulted throughout the project
Good internal configuration is vitally important	Functional specification updated to state layout supports safe inspection. Specific requirements added to ensure components are distinguishable

Environmental Requirements

You Said	We did
The design of the unit is crucial to ensure a successful rollout	Project will have two distinct design streams, oversight from NGED and partners, and will be reviewed by SRP at key design points
The design should remain as compact as possible	Assembly size requirement adjusted to state "shall fit within a maximum target spatial envelope [1.25m x 0.75 m x 0.5m]. The enclosure should be minimised in size where possible required to ensure compliance"
Consideration of embodied carbon should inform the design	Designers will consider using recyclable materials where possible, and the design process plan will ensure designers suitably assess and capture sustainability decisions
The design should be flexible to be adaptable to different property types	We will consider this during the design phase, and the SRP will have the opportunity to review the external casing design for both design teams

Safety and Security Requirements

You Said	We did
Vandalism resistant features should be included	Specific requirement added that OBELISC will be designed to ensure impact resistance, prevent vandalism and comply with BE EN 61439-3

Functional Specification Requirements

You Said	We did
The unit needs to meet flammability standards	Specific requirement added to ensure compliance with BS EN 61439, BS EN 60695 & ENA G81 part 3, resisting heat and fire
The proposed power rating appears low. increasing to a range closer to 60-69kVA would be more appropriate, which would require 3x 100A fuses	Functional specification updated to provide guidance on designing a system with three phase loads of up to 69kVA, with 100A cut out fuses
The product should promote UK manufacturing	Designers are UK based, and sustainability inputs to the design process plan throughout the project will promote consideration of UK manufacturing

Further Considerations

You Said	We did
Environmental factors such as humidity and salt exposure (in coastal areas) should be considered	Encloser will have a minimum IP rating of IP44 to protect against external influences
The cabinet design should reflect a minimum 20 – 25-year service life	The unit will be designed to have a 25-year operating life
A maximum distance between the unit and the property should be established	Policies relating to installation best practice will be developed during the project. Installers are being consulted throughout the project

Design Preferences

You Said	We did
Camouflage finishes are not necessarily appropriate. The unit should complement its surroundings rather than conceal itself	We will consider this during the design phase, and the SRP will have the opportunity to review the external casing design for both design teams
The unit should reference its surroundings	We will consider this during the design phase, and the SRP will have the opportunity to review the external casing design for both design teams
Wall mounting would not be suitable in the majority of settings	OBELISC units will be designed to be standalone, mounted devices.

Visit the website for latest updates: <https://commercial.nationalgrid.co.uk/innovation/projects/on-boundary-enhanced-lct-integrating-service-cabinet-obelisc>

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