D6.4a LAEP+ functionality requirements to support Regional Energy Strategic Planning (RESP)

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1. Context

1.1 The PRIDE Project and the Governance Trial

Planning Regional Infrastructure in a Digital Environment (PRIDE) is a Strategic Innovation Fund (SIF) project led by National Grid Electricity Distribution (NGED) and trialled across local authorities within the West Midlands Combined Authority (WMCA) region alongside five local authorities in South Wales. The project team comprises NGED, WMCA, AITL (providers of the LAEP+ digital tool), NESO and Regen.

PRIDE is now in its Beta phase, which has three core aims: to develop and explore the use of LAEP+ to support local authorities in their energy planning activities, creating a feedback loop to access and share data with energy networks; to understand how the digital tool and new information-sharing and decision-making frameworks can unlock local authority net zero ambitions; and to understand how the tool and frameworks can support energy planning and investment at a regional level under the emerging RESP framework. The Beta phase runs until late 2027, with tool development concluding in October 2026 ahead of the full governance trial.

The primary focus of the PRIDE governance trial is to test how governance structures and information flows from those structures can support regional energy planning and decision making. Specifically, PRIDE is exploring how LAEP+ can strengthen and formalise the data flows within those governance structures. The trial provides the opportunity to test, improve and scale that relationship between local authorities and NGED in a structured way, generating evidence that can inform how processes and information flows can support network planning by Distribution Network Operators (DNOs) and also how Regional Energy Strategic Planning (RESP) processes evolve.

The trial will therefore also explore how future relationships may function between local authorities and the emerging RESP, and a governance arrangement that will enable information flows between local authorities, DNOs like NGED and RESP, as well as other core energy vectors. The trial will test how LAEP+ can support local authorities in contributing to RESP governance and data submissions.

The rationale for treating these as secondary rather than primary is not that they are less important in the long run, but that RESP is still in development and the governance trial must be grounded in relationships and processes that exist now. Critically, the learnings generated are directly applicable to RESP and will be used both to inform RESP processes as they develop and, where appropriate, to build LAEP+ functionality that directly supports local authority requirements to input into RESP governance.

The PRIDE governance trial operates across two interrelated strands. The first focuses on local authority coordination using LAEP+, centered on ensuring local authorities can build, maintain and share portfolios of energy-relevant projects and plans with NGED and, in time, with National Energy System Operator's (NESO) RESP processes. The second focuses on regional strategic information exchange, exploring how data and insights from local authorities can effectively feed into the RESP thematic working groups and strategic boards being established by NESO. While LAEP+ is the primary tool for the first strand, its role in the second is less clear and should be explored in the trial.

By January 2026, ten LAEP-style plans had been created and submitted to NGED through LAEP+, providing early evidence of the tool's potential. Alongside learnings from the LAEP-style plans. Advanced Infrastructure have been running regular in person hackathons, at which LAEP+ use cases are worked through with local authorities and where we use the in person opportunities to surface learnings about where further development is needed. These learnings are central to the development requirements set out in this report.

1.2 The Distribution Future Energy Scenarios (DFES) and LAEP+

The Distribution Future Energy Scenarios (DFES) is an annual process led by each DNO, supported by specialist modelling teams, to produce spatially resolved forecasts of future electricity demand and generation across four scenarios out to 2050. The DFES is a critical input to network investment planning and has become an increasingly important bridge between local energy ambition and national network planning. For NGED specifically, the DFES is the primary mechanism for translating local authority plans and project pipelines into the network investment decisions that will shape the electricity system across the Midlands and South West and South Wales for decades to come.

LAEP+ currently plays a direct role in the DFES process through two distinct types of input — projects and scenarios — which serve different but complementary purposes in informing network planning.

Projects in LAEP+ represent real-world plans and activities that local authorities are either undertaking directly or are involved in coordinating. These might include new housing developments with significant electricity demand, large-scale renewable energy installations, electric vehicle charging infrastructure programmes, or wide-scale retrofit and heating decarbonisation plans. Projects are grounded in specific locations, timescales and delivery pipelines, and their primary value to NGED and the DFES process is as evidence of activity that is actually happening or is credibly planned to happen.

Where a pipeline of projects in a given area confirms that technology deployment is tracking in line with DFES forecasts, it provides reassurance that the network is being planned appropriately. Where project data reveals activity that significantly exceeds or diverges from DFES projections, it provides evidence that forecasts may need to be updated and that network development plans should be reviewed. Crucially, projects provide the real-world grounding that gives local authority plans credibility: they demonstrate that targets and ambitions are backed by tangible activity rather than aspiration alone.

Scenarios in LAEP+ operate differently. They are data modelling exercises, comparable in nature to how a Local Area Energy Plan (LAEP) or DFES might project the uptake of a technology over time in a whole area. A local authority might build a scenario that reflects its own net zero strategy, or a combined authority might develop a scenario representing a more ambitious regional trajectory. Where a scenario developed in LAEP+ shows significantly different technology uptake to the equivalent DFES projections for that area, it can prompt important analytical conversations of whether the divergence represents a credible uplift or a methodological difference that warrants further investigation.

The relationship between projects and scenarios is not simply additive. Scenarios alone, however well-constructed, carry limited weight in the DFES process without an evidenced project pipeline to support them. Together, a well-developed LAEP+ masterplan - combining a coherent scenario with a robust and up-to-date project pipeline - provides NGED with the strongest possible basis for reflecting local authority ambition in the DFES, and for making the investment decisions needed to support it.

Despite this integration, some gaps remain in the current LAEP+ – DFES relationship. For example, local authorities have no way to view previous years' DFES data within LAEP+, making it difficult to understand whether their plans have shifted network forecasts over time. Projects, plans and scenarios within LAEP+ are also created at building level but can be aggregated to different geospatial granularities, including LSOA, MSOA and network geometries including secondary electricity supply area (ESA) and primary ESA. This allows for more like-for-like comparison with forecasts like DFES, which resolve at Primary ESA level. However, the LAEP+ platform does not currently resolve plans to Bulk Supply Point or Grid Supply Point which are the high voltage levels at which the RESP will be resolved. This means that direct comparison between local authority plans and RESP plans is not currently possible in the tool. These gaps are addressed by the development proposals in this report.
Strengthening the LAEP+ – DFES relationship is the primary rationale for the developments proposed here and, importantly, the foundation on which a future LAEP+ – RESP relationship

can be built. A local authority that understands how its plans and projects influence the DFES is better equipped to engage with RESP, and a DFES that accurately reflects local authority ambition and activity provides better evidence for regional strategic planning. The developments in this report are designed to serve both purposes simultaneously.

1.3 RESP and its Implications for Local Authorities

The RESP is a new statutory process established by NESO under the direction of Ofgem, which will produce regional plans for energy infrastructure and decarbonisation across each of the nations and regions of Great Britain. The first transitional RESPs (tRESPs) were developed during 2025–2026 and the process is now moving towards an enduring framework, with a methodology consultation published in November 2025 and ongoing development throughout 2026.

The RESP will produce five key outputs: a Nations and Regions Context; Pathways and Consistent Planning Assumptions; a Spatial Context; an assessment of Strategic Infrastructure Need; and Network Planning Assurance. Each of these outputs draws on data and evidence from local actors, including local authorities, DNOs, industry and community stakeholders. The RESP will be governed through a structure of thematic working groups, feeding into regional strategic boards which will formally approve RESP outputs.

The implications for local authorities are significant. For the first time, local authorities will have a formal route to contribute to regional energy planning through the RESP working groups, but this requires them to have well-evidenced, spatially mapped and up-to-date energy plans and project pipelines. The tRESP process in 2025 demonstrated the challenge: local authorities were asked to complete a Request for Information via a spreadsheet-based process, with many struggling to provide the quality and granularity of data required. The direction of travel is clearly towards more structured, systematic and digital data submissions, and while we know that the full RESP process will differ from the tRESP, the exact methodology is not yet known.

LAEP+ is well-positioned to support this shift. It is already operating as a data-sharing platform between local authorities and electricity networks across five of the six GB DNOs and is used by over 280 local authorities. Within the PRIDE trial, it is being tested as a potential conduit for RESP data submissions and supporting decision-making for RESP regional boards, in addition to its existing role in the DFES process. The developments in this report are intended to strengthen LAEP+'s capability to fulfil both of these roles, generating learnings and data infrastructure that can be directly applied to both DFES and RESP evidence submissions as the processes mature.
It is also important to note that NGED itself is a key actor in the RESP process, with DFES outputs feeding directly into the RESP's Network Planning Assurance component. Improvements to the

quality and resolution of LAEP+ data therefore benefit not only local authorities' ability to engage with RESP governance, but also have a potential to assist NGEDto share the network planning evidence that RESP requires. The governance trial is therefore well-placed to generate evidence that is valuable to RESP from multiple angles simultaneously.

2. The Need for Assumptions in the Absence of Confirmed RESP Methodology

A fundamental challenge for the PRIDE governance trial in developing LAEP+ functionality to support RESP is that at the moment of writing this report the RESP methodology is itself still under development. The November 2025 methodology consultation sets out NESO's proposed approach across the five RESP components, but the consultation process is ongoing and the enduring methodology has not yet been finalised. Key aspects that directly affect what LAEP+ might need to provide — including how local authority data will be collected, what data formats will be required, how social value will be assessed, and how local plans will relate to regional pathways — remain subject to change.

This is compounded by the ambiguity around the Data Sharing Infrastructure (DSI), the overarching digital framework that NESO and Ofgem are developing to underpin data exchange across the energy planning landscape. As of early 2026, the DSI is not yet mature enough to prescribe specific interoperability requirements. Its stated role is to enable use cases and provide connective infrastructure, but it has not yet specified the data standards, exchange formats or governance arrangements that LAEP+ and other tools will need to comply with. In the absence of DSI standards, LAEP+ and the networks it serves have found it necessary to develop practical working approaches to data exchange bilaterally, drawing on existing standards where available and agreeing local conventions where not. The developments proposed in this report follow this pragmatic approach.

Given these uncertainties, it would not be possible or appropriate to design LAEP+ developments solely around confirmed RESP requirements. Instead, this report sets out a set of working assumptions developed on the basis of: the available RESP methodology consultation documents; learnings from the tRESP process in 2025; evidence from engagement with NGED and local authorities through PRIDE; and the wider energy planning policy context. These assumptions have informed the development priorities set out in this report and were agreed and confirmed before the start of the trial, with some flexibility left amend whilst RESP methodology and processes develop.

Importantly, even in the absence of confirmed RESP methodology, all of the developments proposed in this report have clear and demonstrated value for the PRIDE governance trial and the DFES process. They are therefore justified on their own terms — grounded in the evidence of what local authorities and NGED require — while carrying strong potential to deliver additional RESP-facing value as the methodology is clarified.

3. Working Assumptions

The following assumptions have been made in developing the functionality requirements set out in this report. They were agreed by project partners before the start of the trial, with the flexibility to amend as we learn more about the RESP methodology and processes.

3.1 On RESP data requirements

1. RESP will request technology-specific, geolocated data from local authorities in future submission rounds.
2. LAEP+ can serve as a valid input mechanism for RESP local authority data submissions - at least informally during the governance trial period.
3. The RESP will require data structured in a way compatible with DFES building blocks and national Future Energy Scenario frameworks.

3.2 On social value

1. RESP will continue to place weight on social and economic co-benefits as factors in assessing and prioritising strategic infrastructure, based on its stated scope and the precedent set by the tRESP RFI process.

3.3 On governance and process

1. Local authority representatives engaging with RESP working groups may not be the same officers who use LAEP+ on a day-to-day basis.
2. RESP working groups - including LA working group and strategic board - will accept locally generated data from LAEP+ along with any other relevant data as a valid input to regional strategic discussions.

3.4 On data standards

1. A common national data standard or single shared project identifier will not be agreed and implemented during the PRIDE project lifetime. The project will assume a data standard rather than wait for it to be defined.
2. The DFES will move progressively from an annual batch submission process towards a more continuous, responsive process where local authority data can be submitted at any time and reflected in NGED forecasts.

4. Overall PRIDE LAEP+ Development Programme Summary

Six development areas have been identified to support the governance trial and RESP. All six are justified first on their near-term value for the governance trial and DFES process, independent of RESP confirmation. Where RESP methodology confirms specific requirements, developments can be extended or refined accordingly.

Taken together, these six developments represent a coherent development programme that strengthens LAEP+'s value across three interlocking purposes:

1. Improving the quality and usefulness of local authority data for NGED and the DFES process (developments 4.1, 4.3 and 4.6)
2. Generating governance trial evidence that directly informs how RESP should approach local authority data collection and social value assessment (developments 4.1, 4.2, 4.3 and 4.6)
3. Advancing the interoperability of LAEP+ with the wider energy planning data ecosystem (developments 4.4 and 4.5)

In this way, the development programme serves both the immediate needs of the governance trial and the longer-term requirements of RESP.

Table of developments

Ref	Development	What it would deliver	Reach	Impact	Confidence	Effort	RICE score
4.1	Custom targets tracker by technology	Technology-specific targets at milestone years in DFES-compatible units, compared against DFES scenario envelope	5	3	5	3	25
4.2	Social value data and methodologies	Social value data capture (e.g. fuel poverty, green jobs, air quality, health) plus optional calculation framework	5	5	4	5	20
4.3	DFES historical year view	View of DFES outputs across different publication years to enable better comparison	5	2	5	1.5	33

		between different DFES publication outputs					
4.4	External project import and data transformation	Import function for external projects in standard formats, with automated mapping and guided prompts where needed	5	5	4	4	25
4.5	Data model resolution to BSP and GSP level	Extension of data model to BSP/GSP with spatial mapping across political and network geographies and linkage tables	5	2	5	1.5	33
4.6	Stronger project categorisation and taxonomy	Standardised project type taxonomy, sector tags, technology categories and status labels across the full project lifecycle	5	3	4.5	3	23

A RICE score is a quantitative value used to prioritise ideas, features, or projects. It is calculated using the formula: (Reach × Impact × Confidence) / Effort)

Detailed requirements and justification of developments

4.1 Custom Targets Tracker by Technology

Background and rationale

LAEP+ allows local authorities to track net zero progress at a high level, but does not disaggregate by technology - a limitation for both DFES and RESP which require technology-specific, targets in recognised geographies and units comparable to DFES building blocks (e.g. heat pump numbers, rooftop solar capacity, EV numbers). Aggregate-only targets cannot be directly compared to DFES projections or future RESP projections.

NGED's 2025 DFES Stakeholder Engagement Report reinforced this gap: officers found it difficult to relate their plans to DFES scenarios, partly because the tool didn't enable this comparison (NGED_DFES_2025_Stakeholder_Engagement_Report). Most authorities said Holistic Transition aligned to their ambition; noting that where it didn't, the most common reason was a lack of evidence to assess this, with many noting that completed LAEPs could help answer this in

future. This makes it harder for authorities to see the relevance of their plans to network planning, and to understand how their targets compared to the projections of the network.

A custom targets tracker would address this by enabling authorities to set, track and update technology-specific targets (solar, EV charging, heat pumps, storage, wind) which could be used to compare against DFES scenarios and, in time, RESP pathways, improving data quality extracted for both processes.

What the development would deliver

A structured targets module enabling input of technology-specific targets at milestone years in relevant units, with progress tracking as projects/scenarios update. At Master Plan and Scenario level, users could assess which DFES scenario their plans align with and identify where ambition credibly exceeds the DFES (or future RESP) envelope, informing DSO or RESP about potential scenario uplifts.

Alignment with PRIDE and RESP goals

Proposed development supports the trial by letting authorities articulate targets meaningfully to NGED, strengthening RESP advocacy. Learnings - which technologies matter most, common data gaps, how targets compare to DFES - could inform future RESP data collection or RESP data presentation.

4.2 Social Value Data and Methodologies

Background and rationale

Social value in energy planning is gaining prominence in RESP and wider infrastructure planning as understanding the social value impact of a project can give it weight in planning and decision making. The 2025 tRESP RFI process included a question on the social impact of projects and plans however did not specify any details about how the different social value methodologies may be accounted in the analysis process, or whether the RESP applies its own social value methodology. This likely made comparison between projects complicated. However, there are some standardised methods and processes to calculate social value metrics that could be explored to support this requirement. For the purpose of the project, we are assuming that RESP will require social value evidence for investment cases, however even if this were not the case, there is still value in supporting local authorities calculate social benefits for projects as they can support with business case development and investment processes.

Research shows locally grounded, bottom-up energy planning releases greater social and economic benefit than top-down approaches, and quantifying this is central to the investment case (UKRI Accelerating Net Zero Delivery Report). PRIDE authorities have strong ambitions here but lack a structured way to capture and present this data.

The governance trial has identified social value as a development area, exploring whether LAEP+ can help estimate projects' economic and social co-benefits to define place-based value - enabling more evidence-based prioritisation and a stronger case to NGED, RESP and regional stakeholders.

What the development would deliver

Precise fields and methodologies are to be confirmed pending engagement with Regen, WMCA and local authorities. The development is expected to introduce a social value data capture layer in the project module (examples could include fuel poverty households addressed, green jobs, carbon saved, air quality), potentially complemented later by a calculation/estimation framework producing a consistent metric or narrative output for RESP submissions.

Methodologies are contested and context-dependent; a single approach may not suit all projects or regions. The development should stay flexible and updatable rather than locking in a fixed approach now.

Alignment with PRIDE and RESP goals

Gives authorities a structured way to articulate project benefits, strengthening their RESP submissions and gathering evidence for business case development. Testing will generate evidence on what data is realistically collectible, which methodologies suit energy planning, and how data aggregates regionally - valuable for finalising RESP methodology.

4.3 DFES Historical Year View

Background and rationale

LAEP+ currently shows only the most recent year's DFES data, which is useful as a snapshot, but with no way to see how projections have changed year-on-year or whether local plans have influenced them.

This is a significant feedback-loop gap, and one of the most consistently identified issues from PRIDE's first year. Authorities frequently reported uncertainty about whether their submissions had been used, reducing motivation to keep submitting data and undermining trust. If impact

isn't visible, it's harder to justify the resources needed to maintain plans in LAEP+. Closing this loop is a governance and engagement priority, not just a usability fix.

Enabling comparison of DFES data by publication year (e.g. 2023–2025) would address this directly, letting authorities see whether projections have shifted due to the plans submitted to NGED. For NGED, this longitudinal view supports the case for continued investment in local engagement and data quality.

What the development would deliver

A view of historic DFES data within LAEP+, which would enable users to view and compare outputs from different publication years by local authority area or Electricity Supply Area.

Alignment with PRIDE and RESP goals

Supports the trial's success criterion of defined, agreed, reliable data flows. Closes a critical feedback loop, incentivising continued engagement by making impact visible. Evidence on usage and on how plans relate to DFES projections over time will be relevant to RESP's own approach to incorporating local authority data.

4.4 External Project Import and Data Transformation

Background and rationale

LAEP+ helps authorities build and optimise projects, but many also use other tools and store projects in different formats elsewhere. LAEP+ cannot currently ingest external projects, so authorities must rebuild them in-tool or accept incomplete representation — common examples being housing developments or EV charging projects.

This limits LAEP+'s potential as a genuine integration point. The principle emerging from PRIDE engagement is that LAEP+ should be a hub connecting and standardising data from multiple sources, not a closed platform - consistent with the DSI's goal of enabling data exchange without requiring convergence on one tool.

What the development would deliver

An import function for project data from external tools in standard formats, initially focused on formats most used across WMCA (to be confirmed via Q3 2026 scoping). LAEP+ would transform imported data to its internal model - mapping to standard building blocks, spatial assignment to ESA and other geographies, and master plan integration — with guided prompts where automation isn't possible.

Part of this work relates to PRIDE Deliverable 6.4b which explores how the project and LAEP+ can continue to seek alignment with NESO's DSI. This would will include strengthening LAEP+'s project data structure to recognise different types of projects and attributes specific to those projects.

Alignment with PRIDE and RESP goals

The development removes a barrier for authorities with existing modelling investments and lets LAEP+ serve as a genuine integration point across WMCA's diverse tools. Learnings on common formats, transformation complexity and imported-vs-native data quality will inform RESP/DSI interoperability standards.

4.5 Data Model Resolution to BSP and GSP Level

Background and rationale

LAEP+ maps project and scenario data to Electricity Supply Area (ESA) level — sufficient for many planning purposes, but short of the higher voltage Bulk Supply Point (BSP) and Grid Supply Point (GSP) resolutions used currently by tRESP, though this may change.

This gap sits at the heart of the trial's interoperability challenge. Authorities need to link project data to specific points in the network hierarchy - ESA, BSP, GSP, licence area - to view plans alongside network plans. Without this, planning data's value is reduced and the feedback loop with network investment can't fully close.

The primary value is for authorities comparing plans to RESP outputs at GSP level and exploring aggregate regional impacts for emerging planning processes like Strategic Development Strategies.

What the development would deliver

Extension of the data model so projects/scenarios are assigned to BSP and GSP as well as primary and secondary ESA, using NGED's network asset hierarchy. This involves spatial mapping between LAEP+ locations, political geographies (LSOA, MSOA, local authority) and network geographies (ESA, BSP, GSP), ensuring outputs - registers, scenario summaries, master plan data - can be extracted at BSP/GSP level, plus linkage tables between UPRN, ESA, BSP and GSP identifiers supporting cross-system tracking without a single universal identifier.

Alignment with PRIDE and RESP goals

Strengthens LAEP+'s RESP-facing value by matching RESP's spatial resolution. Evidence on practical use of BSP/GSP data will also inform the interoperability standards the DSI needs to specify.

4.6 Stronger Project Categorisation and Taxonomy

Background and rationale

As imported projects diversify and tool use expands, stronger taxonomy will be needed for filtering and searching, and to determine whether different project types (e.g. new housing development vs. commercial retrofit) need different user journeys.

The trial will need to establish common classification approaches and determine which project categories to capture.

What the development would deliver

A standardised project type taxonomy with consistent status labels across the full project lifecycle, agreed with partners and local authorities, designed to evolve with DFES building blocks, RESP categories and DSI standards - enabling filtering and aggregation by category, status and technology.

Alignment with PRIDE and RESP goals

A foundational development improving the quality of all others: the social value framework, targets tracker and BSP/GSP mapping all depend on consistent taxonomy for meaningful aggregation, and it supports regional RESP data aggregation without manual harmonisation.

5. Proposed timeline for delivery

The following timeline delivery is proposed based on the weight of the development required for the new functionality. Items that are fully understood and scoped are are expected to be delivered by October 2026. Items that require further user research and scoping are expected to be delivered in January 2027.

Ref	Development	What it would deliver	Delivery in
4.1	Custom targets tracker by technology	Technology-specific targets at milestone years in DFES-compatible units, compared against DFES scenario envelope	October 2026
4.2	Social value data and methodologies	Social value data capture (e.g. fuel poverty, green jobs, air quality, health) plus optional calculation framework	January 2027
4.3	DFES historical year view	View of DFES outputs across different publication years to enable better comparison between different DFES publication outputs	October 2026
4.4	External project import and data transformation	Import function for external projects in standard formats, with automated mapping and guided prompts where needed	Minimum viable product of basic project import by October 2026. Expanded function by January 2027
4.5	Data model resolution to BSP and GSP level	Extension of data model to BSP/GSP with spatial mapping across political and network geographies and linkage tables	October 2027
4.6	Stronger project categorisation and taxonomy	Standardised project type taxonomy, sector tags, technology categories and status labels across the full project lifecycle	Minimum viable product of initial agreed categories by October 2026. Expanded function by January 2027