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EXEED Project Execution Plan

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**Revision History**

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| **Revision** | **Description of Change** | **Date** |
| 1 | First Release | 25/08/2022 |
| 2 | EXEED Project Execution Plan Template Version 1 published | 19/09/2022 |
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# Project Execution Plan (PEP) Guidelines

The following is an indication of suitable content for inclusion under PEP headings. The headings may be included in an overall project plan but should be clearly signposted.

The EED project execution plan serves as an overview of the complete intent of the EED as applied to the project. It serves as a reference document for anyone with questions in relation to EED to come back to. The “project” in *Project Execution Plan* refers to the execution of the EED process rather than the implementation of energy saving opportunities that will be identified in the EED process.

While the PEP covers planning only for implementation of EED, it should be remembered that during the course of execution of the EED with subsequent implementation of energy performance improvement measures, all of the *Requirements for EXEED Certification* for the chosen level will need to be completed and appropriately documented. As such, the PEP may refer to other documents that need to be compiled during the overall implementation to ensure effective outcomes and successful certification.

The current document should be read in conjunction with EXEED Certified Requirements – Additional Guidance Rev 2 25/8/22.

**In principle, the green headings can be retained and the explanatory text under each heading deleted when suitable content has been added. It is strongly recommended to maintain this order and format to ease evaluation. Avoid duplication of information that belongs in other documents such as Energy Balance. Rather, point at the relevant document.**

## Introduction

* Clear description of the asset boundary that meets clause 1 of EXEED Designed requirements - location, age, no. of buildings/processes etc. Reader should quickly and easily (in the first paragraph) have an understanding of the scope of the project including whether renovation or new build is intended or whether it involves a major energy upgrade.
* If known, include high-level overview of the current or baseline energy use, carbon impact and energy cost so that the reader has an appreciation of scale. Note that the detail of the baseline energy consumption is not needed here as this is covered in the Energy Balance Study.
* Include simple sketches or drawings if useful. Site drawings or maps are often useful material to demonstrate the asset boundary.

## Document Control

* Though not specified in the requirements, this is an appropriate place to refer to how documents will be controlled for the project.

Include here or refer to another document to show how documents are named and revisions controlled. A simple process could include a document list and procedure for how to update this list.

## a) Requirements for design for energy performance and for design for energy management

* Indicate EXEED Certification Distinction being sought – i.e. EXEED Designed, Verified and/or Managed.
* Refer to alignment with organisational strategic objectives
* Brief overview of how design for energy performance will be carried out e.g.:
  + Energy Balance will be carried out – doc reference
  + Challenge and Analyse will be carried out – doc reference
  + Energy Saving Register will be compiled – doc reference
  + How EED owner will make selections and how the design team integrate these into design
  + Whether multi-phase implementation is intended
* Brief overview of how design for energy management will be carried out - refer to:
  + measurement planning,
  + energy variables review and
  + energy performance deterioration
* Indicate where these will be recorded – e.g., separate documents or as appendices in the EED Summary Report or elsewhere.
* In summary, this section can act as a signpost for the reader to show how and where these aspects of EED will be/have been addressed in the project. It may be appropriate to include some of the outputs here in later revisions of PEP.

## b) a list of energy efficient design project objectives

* Include the list of EED project objectives
* Ensure they meet Requirements, i.e.,
  + be appropriate to the size, nature and complexity of the investment
  + be measurable (if practicable)
  + be monitored
  + be communicated\*, and
  + be updated as appropriate  
    (\* Communication can be covered under Communication Requirements)
* Make reference to how they align with strategic objectives
* Progress towards objectives should be included in a project summary report

Examples of EED project objectives may include:

* passive design e.g., use gravity before pumping
* energy performance targets for significant energy uses, e.g., in the case of pumping this could be kWh/m3
* defined cost/benefit hurdles for identified opportunities to be accepted into the design
* new energy technology utilisation
* defined environmental targets, e.g., energy related carbon emissions, for identified opportunities to be accepted into the design
* progression to best practice technology
* implementing best practices in energy performance
* continual improvement goals

## c) requirements for energy measurement, monitoring and reporting

* Include a high-level indication of what will be measured or metered, e.g. *each individual SEU accounting for 75% of energy will have metering installed or upgraded*.
* Include a brief overview of current metering
* Where SEUs are known or partially known at this stage, indicate how metering should align with SEUs
* Specify that a measurement and data collection plan will be required as part of implementation of any measures. Details of this are not typically needed or possible at early planning stage.
* Refer to the needs for metering to enable operational control and maintenance in general and if specific are known at this stage, indicate needs
* The aspects listed here will inform the content of an energy measurement plan.
* This section may also consider measurement etc associated with verification of savings or it may be treated separately. See also k below on M&V

## d) project timelines for the delivery of energy efficient design project objectives

* Indicate approximate timeline for the EED process
* Indicate approximate timeline(s) for potential design/installation phase(s)). This could be multiphase to align with say 2030 organisation targets  
  (Addressing both above adds clarity, i.e., give the reader an understanding of when EED will take place and when the project will be implemented, both of which are relevant to delivery of the EED objectives).
* This should give an indication of real time envisaged dates, not solely in terms of X *weeks after start* etc.

## e) an appropriate schedule of design project reviews focused on energy efficient design

* Include any appropriate C&A sessions and other design project reviews or meetings planned that align with the organisations own internal processes
* Outline how this integrates with the specific organisation’s overall design/procurement process so that there is effective use of EED. E.g., the public sector has a staged design/procurement/construction process – outline where in this process EED reviews should take place
* State who will be involved including specialist suppliers were appropriate
* Consider procurement needs

When the design reviews took place should be included in a project summary report

The following graphic may aid in planning this schedule:

Timeline

Description automatically generated

## f) communication requirements between EED Owner, EED Expert and project design team.

* This can be expanded to include roles as an introduction
* Include names and contact details for design team, EEDO, EEDE
* A brief profile could be included here for each. This should address competence requirements and *independence* of the EEDE
* Indicate how the parties will communicate. A graphic similar to IS399 figure A1 may be appropriate here

A picture containing text, skiing, slope

Description automatically generated

## g) A list of interested parties, their relationship to the design project, their relationship to energy efficient design, and communication requirements

* Include the output of the assessment of the needs of interested parties per 1.2 of the Requirements
* A simple table with each interested party, their role and their requirements and communication needs may be appropriate.

## h) Varying operating conditions that project is likely to experience when operating

* This should provide input for Challenge and Analysis sessions – considerations might include:
  + Potential static factors
  + Times of low activity/high activity
  + Seasonal aspects
  + Potentially relevant variables

Example: *The plant normally operates a 24/5 cycle with essential services running at weekends. A two-week shutdown occurs in August and a one week stop at Christmas. HVAC accounts for a large proportion of energy use and the heating aspect is likely to be driven by weather conditions. It is unclear at this point if production volume is a strong driver of energy, and this will be checked. Etc.*

## i) Criteria by which significant energy uses are determined

* Include clear criteria for selection of the SEUs.   
  It should be possible for the reader to easily see how these have been applied in the project to the actual SEUs selected in the Energy Balance Study.
* Example: *Each energy use that comprises more than 5% of overall use will be included as an SEU. The identified SEUs should comprise at least 80% of overall use.*

## j) Criteria for selecting energy performance opportunities for implementation

* These should be:
  + Clear (and quantifiable where possible)
  + Align with Requirements Clause 3.2 Note: Co-benefits arising may include environmental, production, quality, and health and safety benefits.
  + Be reflected in actual decisions on which measures to implement from ESR
  + Examples of criteria could be:
    - *a simple payback of less than 7 years*
    - *significant co-benefits, e.g., improved production reliability; maintenance savings*
    - *significant CO2 reduction*
    - *significant reduction/elimination of fossil fuels*

## k) Criteria for measurement and verification of the energy performance of implemented opportunities

* It may be appropriate to include M&V under (c) above or detail separately here
* Include a brief overview of how verification of savings will be approached. For example, will approach be aligned with ISO 50015 and/or IPMVP.
* It is recommended that a competent M&V professional be engaged.
* The description does not need to be detailed but should be sufficient for a potential designer to know that metering/measurement should be included at either site level and/or plant level to facilitate a practical M&V approach if there is sufficient information to make that assessment at this point.
* This should give some indication as to the level of M&V that may be required. For example, if the work is being supported by the Energy Efficiency Obligation Scheme (EEOS) there may be specific requirements. If the EED is taking place within an ISO 50001 environment, there may be specific verification requirements.

## l) a procurement and contracting strategy and how they impact on energy efficient design

* Include reference to how procurement will be carried out by the organisation and who is responsible
* Address how the requirements of EXEED Designed Requirements Clause 4.4 will be met in this project – list specific measures if appropriate to meet these. Note also the additional guidance for this clause in the *EXEED Certified Requirements\_Additional Guidance* document
* Make reference to relevant budget windows etc.
* Make reference to any alternative strategies being considered, e.g., energy performance contracting

## m) a list of identified risks and opportunities related to the design project, implemented opportunities & energy performance including those identified in 6.1

* 6.1 refers to clause 6.1 of IS399:2014. This should refer to Clause 1.3 of EXEED Designed Requirements which is equivalent.
* In principle, all the requirements of clause 1.3 could be addressed here in the PEP without the need for a separate record.
* Include the output of the analysis of risks and opportunities exercise here
* Note that “opportunities” may not be so much energy saving opportunities but opportunities to improve the project, e.g., *the building being upgraded is a landmark building so there may be a marketing opportunity following a successful upgrade. This can also be used in the short term as a co-benefit to encourage implementation*.
* Include the actions identified to mitigate risks and take advantage of opportunities. E.g. Include aspects that may impact on feasibility of potential energy measures, e.g. production interruption risk during upgrade works may make them difficult to implement – action could be to break job into phases to reduce risk or maximise work done at low production times e.g. night; novel technology with high savings may carry more risk of teething problems etc. - action could be to accept somewhat reduced savings with proven technology and therefore more predictable overall project outcome.

## n) Consideration of national policies or other mechanisms that could support the viability of energy performance opportunities

* Note how the project can contribute to national or sectoral targets
* Note any relevant state supports. Some possible examples include: The EXEED Grant scheme, The Energy Efficiency Obligation Scheme (EEOS), the Support Scheme for Renewable Heat (SSRH), Better Energy Communities (BEC), and the Accelerated Capital Allowance scheme (ACA).
* Consider non-SEAI initiatives such as Origin Green, Business in the Community, Science Based Targets Initiative etc. or other relevant initiatives for the particular sector.
* These aspects should be included in the formulation of objectives.

## Glossary

* Please explain industry/site specific acronyms and abbreviations when introduced to a document for the first time. A glossary section can be appropriate for this. This will aid understanding by readers less familiar with the specific case.

## Further Guidance

* *EXEED Certified Requirements – Additional Guidance.* The current document should be read in conjunction with this.