# GD3 and GT3 Major Projects EJP Template

**Table of Contents**

*The Engineering Justification Paper must contain a table of contents and page numbers. We would expect any Engineering Justification Paper to be a maximum of 40 pages. Appendices are not included in the 40 pages count limit. Any Appendix referenced in the main body of the report must reference the specific section of the appendix to be reviewed.*

**1.** **Summary Table**

*The following table sets out the key information on the project that the company must provide to Ofgem. This table must be produced at the beginning of each Engineering Justification Paper.*

|  |  |
| --- | --- |
| **Name of Project** | *Working Title of Scheme/Programme* |
| **Scheme Reference** | *Company identifier for scheme* |
| **Primary Investment Driver** | *Asset Health/Load/Environmental/VIP etc.* |
| **Project Initiation Year** | *Year of first project spend* |
| **Project Close Out Year** | *Year that project is fully commissioned* |
| **Total Installed Cost Estimate (£)** | *Current view on total installed cost of the preferred option.* |
| **Cost Estimate Accuracy (%)** | *Indication of accuracy of cost estimate* |
| **Project Spend to date (£)** | *Total monetary value spent on project to date* |
| **Current Project Stage Gate** | *Progress in company project process* |
| **Reporting Table Ref** | *Where in BPDT volumes/costs/outputs are recorded* |
| **Outputs included in RIIO-GT2 and RIIO-GD2 Business Plan** | *Yes/No – where yes, to be fully declared in document* |

*We expect the spend apportionment table below to be merged with the summary table above but have included separately for accessibility purposes. The apportionment should detail the spend for the project over multiple price controls, if applicable. G3 would represent the request for this submission.*

|  |  |
| --- | --- |
| **Spend Apportionment (£m)** |  |
| **GT2/GD2** |  |
| **GT3/GD3** |  |
| **GT4/GD4** |  |

**2. Executive Summary**

*This initial section should provide a succinct overview of the Engineering Justification Paper. It should summarise the key points including the primary issues addressed, proposed solution(s), and the expected outcomes and benefits. It should encapsulate the rationale for the investment and should be no more than a single page.*

**3. Project Status and Request Summary**

*This section must describe the current status of the project and set out what funding is being requested, (i.e. is this funding to complete a project, funding to develop estimates and progress to the next gate or a request to fund a project from start to finish?). This section should also provide a summary of the work completed to date on the topic.*

**4. Problem/ Opportunity Statement**

*This section must define the problem/opportunity that the project seeks to solve, and answers the key questions on the topic. This section must explicitly address the following questions:*

* *Why are we doing this work and what happens if we do nothing?*
* *Under what circumstances would the need or option change for this project?*
* *What are we going to do with this project?*
* *What makes this project difficult?*
* *What are the key milestone dates for project delivery?*
* *How will we understand if the project has been successful?*

**4.1 Related Projects**

*The purpose of this section is to highlight projects within the company which may have conflicting outcomes or spends. It can also highlight projects which may provide learnings from past projects or decisions made on similar topics.*

**4.2 Project Boundaries**

*The purpose of section is to describe the Project Boundaries and what is not included within the project.*

**5. Project Definition**

*This section should be used to define the project.*

**5.1 Supply and Demand Scenario Discussion and Selection**

*The supply and demand scenario is a central element of the project definition and it is important to detail this when selecting a supply and demand scenario for the investment. A discussion on the supply and demand scenario used to generate the project scope and subsequent business case should be included in this section. Only if it is necessary should multiple supply and demand scenarios be carried through the document and logical arguments can be used in this section to discount scenarios.*

*It is expected that a base case supply and demand scenario is selected and justified in this section.*

**5.2 Project Scope Summary**

*This section must set out the project scope and contain headline engineering data. The headline values are the key elements that inform equipment selection/design or project execution. The section should not include explicit details about equipment; instead it should list headline data. Such data could include, for example:*

* *New pipeline – Start and end points, distance, design pressure, design capacity, expected materials of construction*
* *Compressor – Location, design pressure, design capacity, availability required*
* *Decommissioning – Location, key dates, scope boundaries.*

*The supply and demand scenario used for the project basis of design is a critical part of this summary and should be reported alongside the required equipment capacity*

**6. Options Considered**

*This section should include a summary of all options considered, including deferral or do nothing. This section focuses on the engineering options open to solve the problem described in section 3 and uses the project scope in section 4 to generate plausible engineering solutions.*

*The purpose of this section is to highlight:*

* *The options that were identified and evaluated*
* *The benefits associated with each option.*
* *The costs associated with each option*
* *The pros and cons of each option in relation to operation and project timescales etc.*

**6.1 First Option Summary**

*Each option should have its own sub section which describes the option and repeats until all options have been discussed. Each sub section should describe:*

* *The technical detail of the option i.e. capacity, system rating, availability etc.*
* *The basis for the cost estimate/unit cost*
* *The perceived benefits of the option*
* *Delivery timescales*
* *Key assumptions made*
* *Any other items that differentiate the option from the others considered.*

**6.2 Options Cost Estimate Details**

*All plausible options must have a cost estimate. This section lists a simple cost breakdown for each option in a table format. The following items must be included in the table for each option:*

|  |  |  |
| --- | --- | --- |
| *Item* | *Note* | *% of Total Installed Cost* |
| *Engineering Design* | *Detail costs for studies/FEED/Detailed design as appropriate.* | *Must be presented to Ofgem* |
| *Project management* | *Element of project costs attributed to project management, not direct or indirect company costs.* | *Must be presented to Ofgem* |
| *Materials* | *Bulk materials, breakdown preferred* | *Must be presented to Ofgem* |
| *Main Works Contractor* | *Project construction contractor costs.* | *Must be presented to Ofgem* |
| *Specialist Services* | *Costs for any additional services used to support the project i.e. surveys, data procurement etc.* | *Must be presented to Ofgem* |
| *Vendor Package costs* | *Costs of packages purchased for project* | *Must be presented to Ofgem* |
| *Direct Company Costs* | *Refer to Regulatory Instructions and Guidance for definition of direct company costs.* | *Must be presented to Ofgem* |
| *Indirect Company Costs* | *Refer to Regulatory Instructions and Guidance for definition of indirect company costs.* | *Must be presented to Ofgem* |
| *Contingency* | *Contingency included in base cost estimate* | *Must be presented to Ofgem* |
| *Total Installed Cost* | *Forecast total project cost including contingency. Sum of all elements noted above.* | *Must be presented to Ofgem* |
| *Cost Estimate Accuracy* | *This is an important element to give confidence that the engineering is mature and the costs can be relied upon.* | *Must be presented to Ofgem* |

**6.2 Options Technical Summary Table**

*Options must be collated into a single table to allow simple comparison between all the options considered. The table must include as a minimum the following information:*

* *Sensible option title which helps to describe the scope. Avoid labelling options 1/2/3/4/5 etc.*
* *Project Start date*
* *Project commissioning date*
* *Project Design Life*
* *Operating costs*
* *Total installed cost*
* *Cost estimate accuracy noted in %*

**7.0 Business Case Outline and Discussion**

*This section should tie together the probability of failure, consequences of failure, engineering options and costs to investigate the optimum solution to the problem described.*

*The use of normal project justification metrics such as NPV etc. need to be included in this section alongside justification for the benefits claimed alongside the spend.*

**7.1 Key Business Case Drivers Description**

*This section describes how the benefits of the project, i.e. Opex reduction, environmental safeguarding benefits etc. have been calculated. The section should be highly focused and should avoid replicating all the information already held in the CBA; it should only list the pertinent points. Only recognisable metrics based on industry accepted guidance will be accepted and companies should expect Ofgem to challenge the drivers included in this section.*

**7.2 Supply and Demand Scenario Sensitivities**

*The supply and demand scenario is a central element in setting the project scope and the value the project delivers. It is important to highlight the changes that differing supply and demand scenarios have on the business case. This section should be used to explain how changes in the supply and demand scenario used in the basis of design would alter the business case drivers. The sensitivity cases should be carried through into the business case summary to demonstrate the effect on project NPV.*

**7.3 Business Case Summary**

*The business cases produced are expected to include sensitivity cases which test the supply and demand scenarios. The options must be collated into a single table to allow a comparison to be made between each option.*

*The summary table must include:*

* *Sensible option title which helps to describe the scope. Avoid labelling options 1/2/3/4/5 etc.*
* *Supply and Demand Scenario Description*
* *Project commissioning date*
* *Total installed cost*
* *Cost estimate accuracy noted in %*
* *Project Operating Lifespan*
* *Project NPV*

**8. Preferred Option Scope and Project Plan**

*This section should complete the investment “story” and collate information on how the project will proceed to completion.*

**8.1 Preferred Option**

*This section should state the preferred option and is included to avoid ambiguity in the conclusions of the paper.*

**8.2 Project Spend Profile**

*A simple table listing the project spend profile from 2026 to project completion*

**8.3 Efficient Cost**

*This section should provide evidence that the proposed costs are efficient. We expect the following to be considered:*

* *Lessons learnt that have been incorporated*
* *Ongoing efficiencies that have been realised*
* *Historical benchmarks, both internal and external*
* *Expert view*
* *Procurement efficiencies*

*This is not an exhaustive list and other relevant information may be included.*

**8.4 Project Plan**

*This section should set out the project plan and highlight key dates. At a minimum, it must include the following elements:*

* *Progression through stage gate process*
* *Purchase of any long lead items*
* *Commissioning Dates*
* *Key Operational milestones*

*A simple excel based plan is suitable for this section.*

**8.5 Key Business Risks and Opportunities**

*Key risks to delivery of the project and opportunities should be listed in this section along with the potential impact on costs. This section must answer the following question:*

* *What changes to the system operation or supply/demand scenario are required to alter the outcome of this justification paper?*

**8.6 Outputs included in RIIO-GT2/GD2 Plans**

*This section should describe/list scheme outputs included in RIIO-2 plans but not carried out. It should also include a detailed explanation of the reasoning for re-inclusion in RIIO GT3 -GD3, i.e. deferral, substitution, late delivery etc.*