I have assumed group 12 was already introduced as team power

What this needs to cover:

* Introduction
  + project goals
  + purpose and scope of the document
    - Why read it? Who is it for, and what can you learn?
  + introduction to structure of document
  + Scope of the document including whats in it and whats not in it

# Introduction

Team Power has been tasked by Jacobs Engineering Group Inc. (Jacobs) with designing the power supply for a remote bore field attached to a mine site situated in the area around Newman, in the Pilbara region of Western Australia. These bores will provide process water for a nearby mine site. Team Power’s ultimate objective is to provide a design solution for Jacobs which optimizes (by assigned priority) delivery of their stated and unstated requirements[1]. Jacobs have titled this task “Solar Generation for Remote Boreholes” (SGRB)[2].

## Purpose

This document, the design approach (DA), effectively provides a snapshot of a critical planning stage in the project. The DA will be useful as a management tool, as well as for composing the final ‘lessons learned’ report upon project completion. This document presents a summary of progress made by Team Power so far and planned work for the near-future.

Ultimately, the SGRB project requires a solution to a problem. The purpose of this document is to outline proposed designs to satisfy this problem and to detail how the team will be modelling and testing these designs; and so the DA is required in order to undertake design review. The opportunities afforded by design review, as well as the need to prioritise project requirements according to client and stakeholder demands, necessitate the production of a design approach report. Furthermore, without the guidance of updated requirements, and analysis of how these are incorporated into workflow, project focus could potentially be diverted resulting in possible failure to meet requirements.

## Scope

This document provides a summary of Team Power’s work to date and planned future work. Past work includes multi-stage literature review, proposed designs, project management (PM) initiatives and planned project workflow. Literature review includes information on renewable and non-renewable technologies relevant to each proposed design solution, telemetry, cooling and inverters, energy storage, overhead lines and location. It also deals with the justification of design decisions, including which project requirements they address. In addition, preliminary costing information for each design and the risk analysis tools for the project are outlined.

Future work includes blah.

What is not in the scope of this document? What has been left out or only mentioned briefly, but that we’ve done?

## Structure of this Document

Post-introduction, this document continues with a definition of SGRB project scope (section #), an outline of team member contributions (section #) and a justification of the allocation of work through strengths, weaknesses, opportunities and threats (SWOT) analysis of each member (section #). The resources required by Team Power to complete the project are then summarised (section #), followed by a discussion of the four proposed design solutions (section #). Concluding statements (section #) close out the report after a discussion of risk (section #) and project management (section #).

# Project Scope

The SGRB project calls for the design of a power supply to service a remote bore field located in Newman, Western Australia. Jacobs has requested that three design solutions be presented, including the conventional, on-grid, option (base case) and two others. Designs will have a rated lifetime of ten years and each proposed solution will include net present value (NPV) analysis factoring in decommissioning costs. Additional requirements are shown in figure #. Through literature review, simulation and consultation with the Jacobs, Team Power will identify the design that presents the best compromise of the project requirements (Appendix A).

and the decommissioning of the project. A flow chart of the project scope can be seen in Appendix B.

As described in the design brief, the team is required to design a power generation system for a remote bore field where continuous power is necessary in the most economical way. Also, to include a risk analysis and NPV calculation for each option. Aspects of the design process that will be carried out by the team, but not stated in the design brief consist of project management tools such as scheduling and configuration management, contingency in the design of the system, and design factors associated with the remote location. The requirements of the project have been described in detail by the team in the requirements analysis. These requirements can be seen in appendix A.

No. This would not be sufficient. The word 'critical' is important. Think critically about the scope, scale of project as a whole and members' responsibilities and competency for the design. What is included and not included in the scope of the project as described in the design brief? Is this feasible or sensible? Is there something that has been or should be added? How large is the design project? Will you need to set some constraints and make some assumptions and if so what?  How have you shared the responsibilities? Will this work? What can you do to make sure it works? Do you have the necessary competencies and if not what are you doing about it? There are many other questions you could also address in your critical appraisal.

[1] J. Armstrong, S. Bardzovski, X. Lin, M. Mazzoni, S. Wang, and J. Zhang, "Solar Generation for Remote Boreholes: Requirements Analysis," University of Western Australia, Assessment Submission, 2017.

[2] Jacobs Engineering Group Inc., "Electrical & Electronic Engineering Design Project Unit Design Brief Semester 1 2017: Project B. Solar Generation for Remote Borefields," Jacobs Engineering Group Inc., Ed., 1.0 ed, 2017.