



Ark Energy SunHQ – Request for Minor Amendment

Ark Energy Corporation
July 2024
Commercial-In-Confidence

DOCUMENT CONTROL RECORD

Document prepared by:

Ark Energy Corporation Pty Ltd
 ABN: 73 646 809 485
 Level 25, 239 George St
 Brisbane City QLD 4000, Australia

Contact Information:

T 02 8456 7400
E info@arkenergy.com.au
W arkenergy.com.au

A person using Ark Energy documents or data accepts the risk of:

- a. Using the documents or data in electronic form without requesting and checking them for accuracy against the original hard copy version.
- b. Using the documents or data for any purpose not agreed to in writing by Ark Energy.

Document Control						
Report Title						
File Path						
Rev	Date	Status	Author	Reviewer	Verifier (if required)	Approver
A	08/07/2024	FINAL	BF	NN	DK	NN

CONTENTS

1	Introduction	4
1.1	Background	4
1.2	Objective of the Change Request.....	4
2	Scope of Proposed Change	5
2.1	Rationale for the Proposed Change	5
3	Review of Potential Impacts to Support Case for Minor change.....	6
4	Risks Associated with Proposed Minor Change	7
5	Determination of Minor Change.....	8
6	Summary and Conclusion	8
	Appendix A – TCC Support Correspondence	10
	Appendix B – DTMR Support Correspondence.....	10
	Appendix C – AP2021-004 SunHQ DA Application Planning Report.....	10

1 INTRODUCTION

1.1 Background

As detailed at the *SunHQ Development Application Planning Report* (refer Appendix C), Ark Energy is constructing a demonstration hydrogen refuelling station. This project includes a 1MW electrolyser, hydrogen storage, compression and dispensing facility. The project is targeting operations in Q4 2024 and will produce up to 160tpa of green hydrogen. The project is one of the first of its kind in Queensland and is accelerating the decarbonization of heavy haulage in the region.

The significance of this project is that it has received government support and funding from the Queensland State Government through the Hydrogen Industry Development Fund (HIDF), Australian Renewable Energy Agency (ARENA) and Clean Energy Finance Corporation (CEFC). Ark Energy have been actively providing updates to all agencies throughout the development and construction of the project. Ark Energy has been working with Townsville City Council, the Petroleum and Gas Inspectorate, Queensland Fire and Emergency Services and the Department of State Development, Infrastructure, Local Government and Planning to ensure all stakeholder and regulatory interests are met

The development application for Ark Energy's hydrogen production and dispensing facility (SunHQ) located at 60 Zinc Road, Stuart was approved in November 2021 by the Coordinator General with conditions (AP2021/004) with a number of conditions.

Ark Energy is proposing a minor change to *Condition 7 – limitation of use* to enable a limited number of third parties to access the refueller. Condition 7 currently states "7.1 – Hydrogen produced at the approved hydrogen production and dispensing facility may only be used to refuel hydrogen rated trucks that operate as part of Sun Metals Corporation Pty Ltd's logistics fleet or hydrogen powered forklifts used on site".

The intent of this condition is to ensure no significant changes to traffic on Zinc Ave and through the intersection with the Bruce Highway.

Ark Energy has been working with third party customers from industry and government to investigate ways to maximise the utilisation and benefit of the SunHQ facility. Ark Energy have identified potential third party off-takers for hydrogen to support their decarbonisation ambitions and have a net environmental benefit. The additional supply also allows greater utilisation of the SunHQ plant and reduction in the cost of hydrogen.

1.2 Objective of the Change Request

The objective of the request to modify to Condition 7 is to allow supply of hydrogen to a limited number (5) of approved third-party customer vehicles. The proposed minor amendment will allow additional refuelling as an ancillary activity to existing approved activities. The hydrogen supplied to the third-party customers will be used for heavy vehicles such as buses and garbage trucks. This expansion to external customers will help to advance Queensland's domestic hydrogen economy and help decarbonise other businesses in the region.

The change to condition 7 will not alter the predominant existing use of the facility. Ancillary refuelling activities will be limited to a maximum of five specific vehicles approved under a contract agreement with Ark Energy.

Ark Energy consider the change to be characterised by the following attributes:

- Within the scope of the original approval.
- Ancillary to approved activities
- Minor in nature; and
- Unlikely to alter the original SDA approval.

2 SCOPE OF PROPOSED CHANGE

The scope of the proposed change relates to Condition 7 only. Ark Energy propose update to expand the limitations set by Condition 7 of the original application AP2021/004. This expansion will include the SunHQ produced hydrogen being sold to parties outside of the Sun Metals Corporation Pty Ltd logistics fleet.

The SunHQ site will remain a private hydrogen refuelling station for heavy vehicles. However, the amendment will allow access by limited third party heavy vehicle fleets from outside the Sun Metals Corporation Pty Ltd. These heavy vehicles are likely to include buses and garbage trucks. SunHQ will not be for public use or for use by light vehicles.

2.1 Rationale for the Proposed Change

Ark Energy have had interest from several parties in taking some of the additional hydrogen. Under the current design, the facility electrolyser is utilised up to 59% of capacity to service the five Townsville Logistics hydrogen powered trucks that are part of the Sun Metals fleet.

The reasons for the proposed change are:

- Ark Energy's SunHQ refueller has additional capacity to supply third party customers in addition to Townsville Logistics vehicles that operate as part of the Sun Metals fleet.
- Supplying hydrogen to the domestic economy is in line with Queensland Government's commitment to grow a sustainable hydrogen industry that supports renewable resources, creates jobs and strengthens our economy.
- The maximum additional traffic that may be introduced to Zinc Avenue via the Bruce Highway is not significant at a maximum of five vehicles per day
- Existing roads and traffic controls are adequate and appropriate for the proposed additional vehicles.

For the approval of the minor change, the following relevant government agencies have been consulted:

- Department of Transport and Main Roads (DTMR)
- Townsville City Council (TCC)

Both agencies support the proposed change of having external third-party offtake customers limited to a maximum of five additional vehicles per day. Support emails from each agency are provided in Appendix A & B.

3 REVIEW OF POTENTIAL IMPACTS TO SUPPORT CASE FOR MINOR CHANGE

As part of the original SunHQ development application, the potential for impacts arising from the construction and operation of the project were considered low given the scale, nature, and location of the project. The impacts evaluated in response to the proposed additional vehicles are considered commensurate.

Key aspects supporting the finding for a minor change are provided as follows:

- No Public Access for Refuelling

The function of the hydrogen plant being for private use of heavy vehicles will remain. The public and companies outside the agreed limited third-party customer will not be allowed to enter the facility or operate the SunHQ dispensing equipment.

- Queensland Hydrogen Domestic Fuel Economy

Ark Energy's SunHQ project will help to develop Queensland's domestic hydrogen fuel economy. With the amendment of Condition 7 to include a limited amount of third-party providers of hydrogen fuelled heavy vehicles, SunHQ can further improve the domestic hydrogen economy and have a wider impact of decarbonisation in a difficult to transition industry.

- Management of the Increased Traffic

The proposed amendment will lead to five additional vehicles accessing the SunHQ project site. The roads that the extra vehicles will travel on are Zinc Road and the Bruce Highway. Both are high use roads therefore the impact of five additional vehicles will be minimal.

There are no proposed changes to the hydrogen production volume, scale or intensity of the use. Ark Energy consider the change is minor and unlikely to cause relevant referral entities to make a submission, this is supported by earlier engagement with relevant agencies (TCC and DTMR, refer Appendix A & B).

4 RISKS ASSOCIATED WITH PROPOSED MINOR CHANGE

At a high level, there is no real change to the current risk profile that is outlined in the original SunHQ development application. The additional five vehicles will not change the risk profile related to traffic management, car parking and road conditions.

Table 1 – Risk Assessment for Minor Amendment

Potential Risk	Potential Impact	Control Measure(s)	Status Update
Increase of Traffic	Damage to Roads	The additional vehicles are travelling on high traffic roads. The five additional vehicles will not have a significant impact on road wear and tear.	No Change to Current Risk Profile
Unable to Manage Traffic Path	Increase risk of collision Vehicle Drivers unsure on where to go/enter/exit	Current SunHQ Traffic Management Plan Training for heavy vehicle drivers on SunHQ site	No Change to Current Risk Profile
Different Trucks having Different Safety Systems	New additional vehicles not up to the SAE standard of Hyzon trucks	All new additional heavy vehicles will have safety systems to the same standard as Hyzon	No Change to Current Risk Profile
Multiple Trucks trying to Refuel	Incorrect Use of Refueller	Only one refueller will dispense at one time	No Change to Current Risk Profile
Additional Vehicles Parked Onsite	Lack of space for heavy vehicles to park Heavy Vehicles parking in unsafe area Delays to Trucks Refuelling	Allocated waiting zones for trucks will be outlined A refuelling schedule will be implemented	No Change to Current Risk Profile
Additional Dangerous Goods	Expanding the amount of hazardous chemical at the SunHQ facility.	No change to the scale nor intensity of the hydrogen production use is proposed. No change to the assessment nor approval.	No Change to Current Risk Profile

5 DETERMINATION OF MINOR CHANGE

According to the *State development areas | Advisory note- Change Application for an SDA approval – “Generally, a minor change to an SDA approval is when, in the Coordinator-General’s opinion, the change does not substantially alter the original SDA approval in a way that would:*

- *result in a substantially different development, for example: involve a use that is different to the approved use or result in different or additional impacts that have not been assessed as part of the process to gain the original SDA approval.*
- *cause (had the proposed change been assessed as part of the SDA application process to gain the original SDA approval): the Coordinator-General or a referral entity to request additional information about the change a referral entity to make or alter a referral entity submission about the change a person to make or alter a submission about the change or substantially alters any other matter of the original SDA approval.”*

As part of the assessment, referral process, the 2021 SDA application for Ark Energy was referred to the following relevant government agencies and local governments for comment:

- Townsville City Council (TCC)
- Department of Transport and Main Roads (DTMR)
- Department of Environment and Science (DES)
- Office of Industrial Relations – Major Hazard Facilities Unit
- Resources Safety and Health, Queensland.

For the proposed amendment, the government agencies and local governments that have been notified and support this change are Townsville City Council and Department of Transport and Main Roads (refer Appendix A & B)

Ark Energy propose that the requested change to SDA approval AP2021/004 is minor in nature and generally in accordance with the approved plans

6 SUMMARY AND CONCLUSION

Ark Energy SunHQ are proposing a minor amendment to Condition 7 of the development application to allow five third party heavy vehicles to refuel at SunHQ.

No significant change to the scale and intensity of the use nor the use type is proposed. The project site for the pilot hydrogen production facility remains within the approved development footprint. The proposed amendment is within the scope of the original approval, ancillary to approved activities, minor in nature and unlikely to alter the original SDA approval.

Additionally, relevant referral agencies (DTMR and TCC) have indicated support for the change.

A review of the impact assessment of the proposed change was undertaken and found that there is no significant impact. The potential risks associated with this amendment were investigated and found that there was no change to current risk profile.

Ark Energy consider the change to the approval to be consistent with a minor change and generally in accordance with original development application.

In all instances Ark Energy confirm the following elements of the original application remain unchanged and upheld:

- Impact Assessment
- Risk rating and management controls
- Referral entities and associated submissions at Conditions of the SDA

As such the proposed addition of third-party heavy vehicles is considered consistent with a minor change. Ark Energy seek approval from the Coordinator General to amend Condition 7 to allow filling of up to five third approved party vehicles under contract.

APPENDIX A – TCC SUPPORT CORRESPONDENCE

APPENDIX B – DTMR SUPPORT CORRESPONDENCE

APPENDIX C – AP2021-004 SUNHQ DA APPLICATION PLANNING REPORT
