

Investment Memo 1: Grand Gulf Energy (ASX: GGE)

- **CLOSED**

Memo Opened: 8th Dec 2021

Memo Closed: 29th Nov 2022

Reason Memo Closed: It has been roughly 12 months since our last GGE Investment Memo and we want to refresh our expectations for GGE's next 12 months.

Shares at memo open: 49,940,826

Shares at memo close: 32,510,000

What does this company do?

Grand Gulf Energy (ASX: GGE) is a Helium exploration company aiming to make a commercial Helium discovery in Utah, USA. A region dubbed the "Saudi Arabia of Helium".

What is the macro theme?

Helium is a critical component in the manufacture of semiconductors.

Semiconductors have become a critical part of the supply-chain across almost all industries from computer chips that power the modern world to cars, washing machines, smartphones and military equipment.

The US is currently looking to secure a *local supply* of key commodities, which includes semi-conducts, which are predominantly manufactured in Taiwan.

29-Nov-2022: Grade = A:

Domestic helium prices in the US have increased ~1,000% since we first Invested in GGE (from US\$200/mcf to ~US\$2,000+). In July 2022 the US passed the "CHIPS for America Act" to strengthen domestic semiconductor manufacturing as the US government looks to mitigate the geopolitical risk associated with the concentrated semiconductor manufacturing in Taiwan.

Why do we continue to hold in 2022?

1. **Near term drilling event.** GGE plans to drill its first helium well in March 2022. As with most drilling, we expect a share price run up in the lead up to drill results as investors speculate on a positive result.

29-Nov-2022 Grade = A

GGE managed to drill and then complete a workover program at its first well within a month of its anticipated timeline. This came only six months after we Initiated Coverage, which we think is a fast turnaround considering labour shortages, supply chain delays and competition for exploration drill rigs.

2. **Location of project.** GGE's helium project is located amongst a number of large producing helium companies and helium production plants in the US. The project is located 8 miles from the Doe Canyon Helium Plant owned and has existing pipeline infrastructure around its project providing for a quick pathway to production.

29-Nov-2022: Grade = A

Shortly after we Initiated Coverage, semiconductor giants Intel and TSMC started work on two separate semiconductor plants in Arizona (in close proximity to GGE's project).

We think this was the key reason why GGE was able to sign an offtake agreement before it commenced drilling. We think that chip manufacturers in the area might look to secure reliable, local helium supply, as forecast demand is set to increase in the coming years.

3. **US looking to secure local supply of semiconductors:** Both America and China are looking to secure key supply chain materials for semiconductors to advance their industrial modernisation ambitions. Helium is critical in the manufacturing process for semi-conductors and we expect demand to increase exponentially as the world's commodity supply chains are decentralised.

29-Nov-2022: Grade = A

We have seen over US\$52BN in commitments from the US government and ~US\$260BN from private companies to develop the US domestic semiconductor industry. This was accelerated by the geopolitical risks highlighted by the Russia/Ukraine war and fast tracked through the bi-partisan "CHIPS for America Act" passed in June this year.

4. **Performance milestones incentivising drilling and analog fields.** GGE's acquisition terms are structured so that they earn-in their final 85% ownership after drilling 3 wells. The 1st well before October 2022 and the remaining 2 wells before October 2023.

29-Nov-2022: Grade = A

GGE drilled its first helium exploration well, Jesse-1, well before the October 2022 deadline for the performance incentive rights to vest. GGE has already started planning its second well which is expected to be spudded this month (December 2022).

We think these performance conditions have provided focus to GGE's management on drilling and drilling quickly.

What do we expect the company to deliver in 2022?

Objective #1: Drilling of the first well at the Helium project.

We want to see all of the necessary planning and permitting progress for the maiden drilling program slated for March 2022.

29-Nov-2022: Grade = A

GGE completed its drilling program on time, and announced the discovery of a working helium system with grades of up to 1% helium.

Objective #2: Expand the size of the resource

GGE's current resource is on leased land that covers 28,056 acres. The goal for the Joint-Venture is to secure 35,000 acres of leased land and as a result increase the size of the resource.

29-Nov-2022: Grade = D

GGE increased its landholding and prospective resource shortly before our Investment Memo was launched. Since then, GGE didn't manage to increase its lease holding beyond the existing 28,056 acres. This is likely because the company was focused on drilling its first helium well.

Objective #3: Progress commercialisation of the Helium resource

GGE are currently negotiating off-take agreements. We expect some news regarding these over the next 12 months. We also expect a pipeline access deal to accompany any offtake agreements.

29-Nov-2022: Grade = B

Whilst GGE didn't manage to sign a pipeline access deal, the company did get both a strategic partnership and offtake agreement signed with Paradox Resources - the owner of a helium processing plant only ~8km away from GGE's project

What could go wrong?

Exploration Risk: GGE's project is still at the prospective stage. There is a risk that drilling returns no helium and the project has no value.

29-Nov-2022: Grade = A

GGE announced the discovery of a working helium system with grades of up to 1% helium.

Commercialisation risk: There is also a risk that even if helium is discovered, the flow rates are not sufficient for the project to be economically viable, or that the well flows high water/oil content. This will reduce the probability of economically recovering helium.

28-Nov-2022: Grade = F

Although GGE found a working helium system, it was unable to produce a commercial flow rate from two wells drilled. This risk unfortunately materialised and it will be the key focus for GGE's next drilling campaign.

Financing risk: GGE is an early stage explorer, there is a risk that market conditions change & funding dries up for high-risk exploration like GGE's.

28-Nov-2022: Grade = A

GGE managed to address this risk by raising \$11M at 4.4c per share earlier in the year. This is well above GGE's current share price of 2.1c and well timed by management in anticipation of GGE's drilling campaign.

GGE now has \$7.1M (at 30 September 2022) and should be able to finance at least its next drilling program without having to raise new funds.

What is our investment plan?

Our plan is to hold a position in GGE through the three well program.

We will aim to sell ~20% of our holding during the share price run up to the March 2022 drilling results to partially de-risk our position. After those drill results are analysed - expected to happen in the middle of 2022, we will reassess our investment plan based on the new information.

28-Nov-2022: Grade = A

In line with our investment strategy we Top Sliced and nearly Free Carried our investment between February and April 2022 in the lead up to the drilling results (our average sell price was 3.82c).

We sold around ~34% of our Initial Investment, which was a little more than we initially anticipated - however, as GGE's share price had increased more than 300% from our Initial Entry Price (unlocking one of our "Break Conditions") we wanted to free up the capital given the market uncertainty at the time.

We haven't sold any shares in GGE since April 2022 and are holding onto our position in anticipation of GGE's follow up drilling campaign, more details for our future investment plan in our new GGE memo.