WEEKLY STATUS REPORT

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| Name: | Julian Florez |
| Week Ending Date: | 02/06/2022 |
| Self-Assessment: | Green, ~~Yellow~~, ~~Red~~ |

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| ACTIVITIES COMPLETED THIS WEEK |
| The following activities were completed this week:   * Development of green ammonia production optimization model in line with the conceptual outline below      * Data and general work update repository is located here: [GitHub - julflore000/KAUST: Work/research done for my summer at KAUST!](https://github.com/julflore000/KAUST) * Initial visualization of results from dummy data and validation that model is operating within expectations can be found at the jupyter notebook * Currently getting wind and solar data from the following resource: [JRC Photovoltaic Geographical Information System (PVGIS) - European Commission (europa.eu)](https://re.jrc.ec.europa.eu/pvg_tools/en/tools.html) * It appears that there is data available for wind and solar from the following atlas however I am unable to access the resource: [Renewable Energy | King Abdullah City for Atomic and Renewable Energy](https://www.energy.gov.sa/en/futureenergy/renewableenergy/pages/renew2.aspx) * First runs of geographical data included below. Past studies have found most optimistic green LCOA ~ .4-.5$/kg ([source](https://pubs.rsc.org/en/content/articlelanding/2021/se/d1se00345c#!) see table 6). Other studies ([source](https://pubs.rsc.org/en/content/articlelanding/2020/ee/d0ee01707h)) have found LCOA around $1/kg for Saudi Arabia. Initial results with similar parameters have an output from our model ~ $.9/kg * Takes ~25 minutes for full year run |
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| ACTIVITIES IN PROCESS | NEXT ACTIONS | DUE DATE |
| **Developing GUI for non developer interaction of model (initial sketch up done however focusing on results first)** | * **Review model assumptions and identify if model needs to be tweaked** * **Initiate first look at distribution and cracking side of Ammonia supply chain** |  |

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| ACTIVITIES TO BE STARTED NEXT WEEK |
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| LONG TERM PROJECTS |
| * Analyzing optimal economic analysis of green ammonia from production to end consumption * Increasing useability of model for non-code developer use. |

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| ISSUES FOR IMMEDIATE ATTENTION |
| * N/A |

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| KEY TEAM INTER DEPENDENCIES |
| * N/A |