Integrating Nuclear and Renewable Energy Sources

**Objective:**

The objective of the project is to integrate nuclear and renewable energy for a zero greenhouse gas emission electricity grid.

**Makeup of the Final Grade:**

30% interim reports

30% oral presentation

40% final report

|  |  |  |  |
| --- | --- | --- | --- |
| Final Deliverables | Interim Deliverables | Associated Tasks | Dates / Leads |
|  | a) Reactor Technology | a1.1)Pedro went through part of the technology description of the ThorCon MSR including the Reactor, the Silo, the power module and the site plan.  a1.2)Adria did research on the ThorCon reactor technology including: recycling stream, membrane wall and passive decay heating, passive shutdown, silo cavity etc.  a1.3) Joseph researched the financial side of ThorCon’s MSR to identified how much the nuclear plant power plant and secondary process (gasoline production or desalination) would cost. Additionally, he identified how this cost along with the technology’s construction time compared to conventional reactors. | October 5 |
|  | b) Secondary Process | b1.1) Pedro researched hydrogen production as an option to couple with the reactor technology.  b1.2) Adria has done research on methanol production and it’s ability to couple with molten salt reactors  b1.3) Joseph looked into desalination and identified its potential benefits and limitations when coupled with MSR’s. | October 15 |
|  | c) System Interconnection Description | TBD | November 1 |
|  | d) System Managements and Interoperability | TBD | November 15 |
| Comprehensive Assessment | e) Capstone Expo Preparation | TBD | December 1 |